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UNIVERSITY OF CALIFORNIA
MUSEUM OF VERTEBRATE ZOOLOGY

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Behle, W. H.

1933 – 1937

1. MVZ and local – Jan. – May, 1933
2. Trinity, Humboldt Cos., Calif. May – June 1933
3. Berkeley and MVZ. June – Dec. 1933
4. Salt Lake City, Utah Jan. 1, 1934
5. S. F. Bay region Jan. – May 1934
6. Salt Lake City, Utah June 1934
7. San F. Bay region July – Aug. 1934
8. Oroville, Butte Co.; Berkeley Aug. 1934
9. No. Calif. and southern Oregon Aug. 1934
10. Nevada Sept. 1934
11. Catalog of Specimens – Sept. 4, 1934 – June 4, 1937

Behle, W. H.
1933, Jan.–May

Museum of Vertebrate Zoology
Local Notes
Specimen Records – #1–52

Behle, W. H.
1933

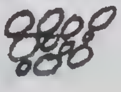
Jan. 11 - May 15, 1933
Mus. Vert. Zool., and local
Specimen Nos. 1-52

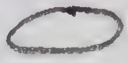
W. H. Behle
1933.

Museum Vertebrate Zoology
Berkeley, California

January 11, 1933.
Acc 4042

1. ♂? Wood Duck
Picked up dead 10 miles east of Gridley, Butte Creek, Sutter County, Calif. by Ralph Ellis on Dec. 28, 1932. Skeleton only.

2. ♀ Great Horned Owl. 1544.3 grams.
Ovary 

3. ♂ Great Horned Owl. 1010 grams.
Testes 

4. ♀ Sharp-shinned Hawk 199.1 g.

The above three birds brought in by Ralph Ellis from 10 miles east of Gridley, Butte Creek, Sutter County, California. Taken on Dec. 28, 1932 and kept in cold storage. The owls were together in a tree when shot.

The ♀ owl not only weighed more but appeared larger. Color differences of the two birds also noticeable.

W. H. Behle
1933.

Museum Vertebrate Zoology
Berkeley, California

January 16, 1933.
Acc. 4043.

5. ♂? Warbler wt. 9.3g.
Received from Mrs. R. M. Sims. Found dead at residence, 36 Hillcrest Ave. Berkeley, Alameda Co. Calif.

January 17, 1933
Acc 4046

6. ♀ Cooper Hawk wt 443.15 g. Ovary
E. S. Sumner, Sr. Shot by U. C. employee in Botanical Gardens, Strawberry Canyon, Berkeley Alameda Co. Calif. Skeleton of body also.

January 23, 1933
Acc 4047

7. ? Audubon Warbler wt. 9.7 g.
Received from Mr. G. Tonkin 1445 Garfield St. Berkeley, Ala. Co. Calif. Found in backyard Jan. 21, 1933. Study skin.

Acc 4048

8. ♀? Golden Crowned Sparrow wt. 27.2 g
Found dead by Mrs A. Risdon at Francisco St. between Shattuck and Milvia, Berkeley, Alameda Co. California Jan. 21, 1933
E. L. Sumner Sr. Band # 140951C

W. H. Behle
1933

Museum Vertebrate Zoology
Berkeley, California

Jan. 23, 1933.
Acc 4049

9. ♀ Horned Puffin   wt. 460 g
Skin.

10- sex ? Ancient Murrelet
Skeleton only.

These two birds picked up on outer beach San Francisco, 1/2 mile below Fleishhacker Park Jan. 22, 1933 by Vincent Mowbray of 5052 Fairfax Ave, Oakland and Morgan and Jackson Harris of 5023 Fairfax Ave. Oakland.

Jan. 25, 1933
Acc 4054

11. ♂ Horned Owl   wt. 1083 g.

Between Lafayette and Orinda, Contra Costa Co.; Calif. by unknown. Thru E. L. Sumner Sr. Jan. 25, 1933. Was in captivity several days with broken wing. Skin only. Testis ⬭

Jan. 29, 1933
Acc 4054

12. ♀ Barn Owl.   wt 530 g.

From a barn (found dead) near Lafayette. By unknown. Thru

Berkeley, Alameda Co. California.

Museum Vertebrate Zoology.

E. T. Sumner Sr. Jan. 29, 1933
Ova

Feb. 8, 1933.

Accession No. 4057

13 ♂? Golden-crowned Sparrow. Wt. 27.5 gms.
Received from Mrs. Robert Levins, picked up at her residence, Yosemite Road, Berkeley, Alameda Co. Calif. Feb. 8, 1933.

Feb. 13, 1933.

Accession 4060

14 ♂ Sharp-shinned Hawk. Wt. 96.8 g.
From Mrs. Hilda Wood Grinnell. Was killed by neighbor because attacking linnets in garden. Berkeley, Alameda Co. Calif. Feb. 13, 1933. Stomach contents could not be determined but no birds.

Feb. 17, 1933.

Mammal trapping for Zoo 113. Ten traps set out at dusk on the south side of Strawberry canyon, U.C. campus at a point directly opposite the chicken ranch building about a quarter-mile from the mouth of the canyon. 3 rat traps and 7 mice traps were placed from the stream side on up

the slope ten yards apart. Yield was two Peromyscus.

15 ♀ Peromyscus truei gilberti 176-85-23-21

16 ♀ Peromyscus truei gilberti Destroyed

Feb. 25, 1933.
acc 4085

17 ♂ Finch wt. 19 grams.

From Mr. W. I. Follett Feb. 25, 1933. Piedmont, 157 Bonada Ave. Berkeley, Ala. Co. Calif.

March 2, 1933
Acc. 4068

18 sex ? Fox Sparrow. wt. 29.9 grams. Skeleton only.
19 sex ? Fox Sparrow. wt. 31.7 grams. Study skin
20 sex ? Creeper wt. 7.4 grams. " "
21 sex ? Wren-tit wt. 9.7 grams. " "
22 ♀ Spotted Towhee wt. 41.1 grams. " "

These five birds taken by A. H. Miller on Palo Colorado Creek (2 miles up from mouth) south of Carmel, Monterey Co., California on Feb. 27, 1933.

Berkeley, Alameda Co. California
U. C. Campus:
Museum Vertebrate Zoology

March 3, 1933

Acc. 4072

23 ♀ Song Sparrow. wt. 17.4g.
24 ♂ Song Sparrow. wt. 18.9g.
25 ♂ Song Sparrow. wt. 16.9g.

These three Song Sparrows taken by E. W. Gifford in Dimond Canyon Oakland March 2, 1933. Alameda County, California.

Acc. 4073

26 ♂ Mallard — No weight taken
27 ♂ Mallard — " " "
28 ♂ Mallard — " " "

These three were domesticated ducks. Procured by Mr. G. G. Kimura in San Leandro, Alameda Co. California Dec. 30, 1932.

29 sex ? Mudhen. No weight taken.
Holden Island, San Joaquin Co. Calif. By G. G. Kimura Dec. 30, 1932.

Berkeley, Ala. Co. Calif.
U.C. Campus. Strawberry canyon.

March 4, 1933

Trap line of 20 traps (4 rat traps and 16 mouse traps) set out at 5:30 P.M. at a point south of the Botanical Gardens. They were placed from the stream up along the south side of Strawberry canyon for 50 yards. Streamside habitat yielded one shrew; underbrush habitat on hillside yielded four Peromyscus; and one pocket mouse taken near a bare facing under some laurels collected March 5, 1933 at 6:15 A.M. Four other traps sprung. The mouse traps were placed in promising locations. The rat traps were placed on Woodrat nests but were undisturbed. The trap that caught the pocket mouse was placed near the entrance to a hole.

March 5.

30 ♂ Peromyscus truei gilberti Wt 26.5g. 192-88-24-21
31 ♂ Peromyscus truei gilberti Wt. 26.1g 193-85-23-21
32 ♂ Peromyscus truei gilberti Wt. 27.8g 203-100-24-22
33 ♂ Peromyscus truei gilberti Wt. 26.1g 192-94-23-21
34 ♂ Perognathus californicus californicus Wt. 26.6g. 199-108-24-12
35 ♂ Sorex Wt. 6.6g. 113-45-12-7

Berkeley, Alameda Co. Calif.
U.C. Campus.
Museum Vertebrate Zoology

March 6, 1933.
Acc 4074

36 ♂ California Thrasher. Skeleton only
Taken on upper South rim Strawberry Canyon, Berkeley, Alameda Co. California March 4, 1933 L. W. Saylor collector.

March 11, 1933.
A line of twenty traps set out in Claremont canyon 1 mile East of Claremont Hotel. Four were placed near the stream about twenty feet apart but showed no signs of having been touched during the night. Eight mouse traps were placed in Microtus runs in 6" grass on the South facing slope. Two were sprung the following morning but there was no catch. On the North facing slope six mouse traps were set out about 10 yards apart in suitable locations. One Peromyscus was taken. Two rat traps were placed on a Woodrat nest and the rat was taken. Heavy rain all during the night.

March 12.

37 ♀ Woodrat wt. 346.3 g. 446-213-44-32

38 ♂ Peromyscus wt. 18.6 g. 161-62-20-13

March 11, 1933

Acc. 4077

39 ♀ Sparrow Hawk. wt. 83.6g

Brought in by E. R. Hall on March 9, 1933. from Lafayette, Contra Costa Co. California Found dead; saved as study skin.

March 14, 1933.

With L. D. Christenson set out twelve mice traps on North facing slope of N. Claremont canyon 1/2 mile East of Claremont Hotel. Placed on slope under heavy underbrush. Five gopher traps and six ground squirrel steel traps set on South facing slope of Strawberry canyon 1/2 mile E of Stadium. 5:30 P.M.

March 15, 1933.

Traps set previous evening taken in. Mice traps in Claremont canyon yielded ~~two~~ one Peromyscus and one Sorex + one Reithrodontomys. None of the ground squirrel traps had been sprung. One gopher taken and one ~~other~~ trap lost. Christenson took the gopher and ~~the~~ mouse.

40 ♂ Reithrodontomys wt. 9.5g. 139-72-17-13

41 ♂ Sorex wt. 8.6g. 121-47-14-7

W. H. Behle
1933

Berkeley, Alameda Co. Calif.
U. C. Campus

March 19, 1933.

42 ♂ Mexicanus 174-47-22-17-49.4g.
From hills at head of Dwight way or at top of Hamilton gulch. 1000 ft.

April 2.

43 ♂ Thomomys 213-49-26-6 184.8g.
South facing slope of Strawberry canyon 1/2 mile east of stadium

April 6
acc. 4089.

44 ♀ Cedar Waxwing 27.2g.
Found by Lloyd M. Hightower, 4335 Howe St. Oakland March 27, 1933. Hit by stone near Westlake Jr. High School, 26th and Harrison St, Oakland, Alameda Co. Calif. Brought in by Mona Kitagaki, 3935 Piedmont Ave. Oakland. Saved because of the unusual red tips on the tail.

April 29,
acc. 4103.

45 sex? Crossbill. Found dead at Hunters, Stevens county, Washington. on April 25 by Martin L. Wolffe
Skeleton only.

May 2-

Acc. 4110

46 ♂ Calaveras Warbler 8.7 g.
Received from Mrs. Helena E.
Lindsey. 20882 E. 14 st. Hayward.
Picked up dead May 1,

May 10-
Acc. 4116

47 sex? Titmouse.
Taken April 28 by Mrs. R.
Stohler at Mokelumne Hill, ~~Stanislaus~~ Calaveras
county, California. Skeleton only

May 15-

48 ♀ Myotis - 78- 33- 8- 11 1 emb. x 6 mm.
49 ♀ Myotis - 77- 34- 9- 11
50 ♀ Myotis - 80- 38- 10- 12 1 emb x 7 mm.
51 ♂ Tadarida mexicana - 98- 37- 7- 13.
52 ♀ Myotis - 86- 37- 8- 11 1 emb. very small.
These bats taken by W. B. Davis
1/2 mi. S. Oroville, Butte Co., Calif.
on May 14, 1933. Brought in
alive. There were about 50 all together
[See notes of R. T. Orr on this
date for remainder.]

Behle, W. H.
1933
May - June
Trinity - Humboldt Cos., Calif.

Behle, W.H.
1933

Trinity and Humboldt Cos., Calif.
May 17 – June 15, 1933
Spec. Nos. 53-167

Behle
1933

Museum of Vertebrate Zoology, U of C, Berkeley, Calif.

May 17.

Left Berkeley at 8:25 A.M. in M.V.Z. Dodge truck with R.M. Gilmore. Traveled slowly along Redwood Highway via Santa Rosa, Garberville, etc., to Alton, thence east a few miles to Harry E. Wilder's ranch. There met Dr Grinnell who had traveled by train. Little seen of interest along way, in fact few birds were noted. Intermittent rain all day. Ten Turkey Vultures seen at one time while driving up a mountain pass ~~along~~ shortly after passing Santa Rosa. At another time a dozen or so Crows were seen in a field on the west side of road. They were about 50 yards apart and walking about thru the weeds and grasses. Unable to determine the attraction.

May 18.

Spent night at Wilders ranch and had breakfast there. Brown Towhees, Song Sparrows and White-crowned Sparrows around house. Drove to Bridgeville, to Mad River, to Ruth and on to the ford across the Mad River. This being impossible to cross we established base camp. Our location is about 7 miles above Ruth and two miles below the Anderson ranch run by Miss Ann Anderson.

Beldle
1938

Mad River ford, 2700 ft., above Ruth, Trinity County California

May 18.

Altitude here 2700 ft. We are 3 miles S.E. of Horse Ridge in a direct line, about 5 by trail. River high due to recent heavy rain. Cold and stormy with periodic spells of rain. At Ruth three Doves flew from nearby field. Linnets were singing near house. On river were a ♂ + ♀ American Merganser.

May 19.

Cold, cloudy and stormy. All the deciduous trees considerably retarded by the cold weather. Cottonwoods in leaf and willows near river have buds scarcely swollen. The manzanita, however, is in full bloom. There is the river and river bed proper, then a second river bottom some 10 ft. above the present water course, and 100 yards wide on North side to 1/4 mile wide, then a bench that rises abruptly some 30 ft above the second river bottom and then there is a gradual rise and slope to the top of the ridge which at the highest point (Horse Ridge) is about 6106 ft. On the second river bottom are bushes, thick in patches, of Ceanothus or Deer brush and Manzanita. The latter extends up onto the bench and a few hundred feet in places up the

Beible
1933

Mad River ford, 2700 ft. above Ruth. Trinity Co. Calif.

May 19.

slope. The side hills and slopes are thickly wooded with Douglas Spruce, Yellow Pine, Black Oak, Garry Oak and some Digger Pine occurs. Also on the ridges or hogs backs are to be found huge madrones. This is good Transition zone. The underbrush is rather dense and the ground heavilly covered with oak leaves. A few flowers are out such as yellow violets, Shooting Stars, and Dog tooth violets. New stand of Douglas Spruce thick in places. Many large dead Yellow Pine standing and fallen. Show considerable evidence of Woodpecker work.

Went out with Dr Grinnell. Followed along second river bottom 1/8 mile west. Sign of gopher, + Dipodomys. Heard one chipmunk at edge of bench along logs, coyote tracks and Deer tracks. It looked as though the coyote had lunged at a Kangaroo rat since the tracks showed where it had turned and toes had dug in near a fresh hole.

Spotted Sandpipers piping away along river. Chipping Sparrows seem

Behle
1933

Mad River ford, 2700 ft. Above Ruth, Trinity co. Calif.

May 19

numerous along second river bottom. Five Calliope Humming birds around the manzanita bushes. These in bloom are the present attraction. Assumed that they will move on up the slope as it warms up and more plants develope with the spring. Black-Throated Grey Warblers along second river bottom and on up slope in pines and oaks. A census was kept of the birds seen. (For results see Dr Grinnells notes.)

In following up a slope in the bottom of a small ravine the nest of a Hermit Thrush was found. The bird was on the nest and left as I approached to within five feet. The nest situated in a cut-out portion (probably the work of Woodpeckers) of a large dead Yellow Pine. About four feet from ground. Near water. Contained one egg. Bird to be kept under observation. Full description of nest and eggs later. The female flew twenty feet away and waited. No sound made. No male around.

Behle 1933 Mad River ford, 2700 ft. above Ruth, Trinity Co. Calif.

As we were resting 50 yards beyond the nest, she flew near silently and unobtrusively to investigate our presence.

Continued up ravine to top of ridge and followed forestry service trail up to about 4000 ft. One lone crow flying high over head traveling in a N. E. direction called once. Grouse - one - heard booming on nearby divide. Saw one blue-fronted Jay. Heard a Pileated Woodpecker in distance. Pair of Junco's in black oak. Took one Black-throated Gray Warbler.

Came upon two piles of fresh coyote feces in middle of trail. In each case they were closely examined for evidence of kind of food eaten and bones, teeth and fur hair found therein were saved. Appeared to be remains of rabbit, Microtus and Gopher. Deer tracks seen and one doe skull found but not taken. Turkey Buzzard in distance.

No bats seen at night - too cold. Many Hylas calling down by the river. One Hutton Vireo heard near camp

Behle 1933 Mad River ford, 2700 ft. above Ruth, Trinity Co. Calif.

May 19-

at breakfast time. Red-breasted Nuthatches seem numerous judging by calls.

53 ♀ Black-throated Gray Warbler. wt. 8.8 grams. Taken in Black Oak, 20 ft. above ground at an altitude of about 3500 ft. Ovary well developed. yolk plainly visible ⁘ Would be breeding in about two weeks.

54 ♂ California Purple Finch. wt. 23.5 grams. Taken by Gilmore at 2700 ft. altitude near old barns below our camp and across the river. Testes O

55 ♂ Spotted Towhee. wt. 41.4 grams. caught by mouse trap, 2700 ft., at base of a Ceanothus bush 30 ft. from small stream.

May 20-

Temperature this morning 42° 5:30 A.M. cloudy. Zigzagged up the slope north of camp for a mile thru heavy underbrush. Very quiet this morning. Chipping sparrows heard frequently. One Jay (Probably California) alighted in top of Black Oak but soon flew on again. One Jack Rabbit seen this morning along the second river bottom. There seems to be a good many birds along the

Behle
1933

May 20.

open flats and river bottoms but they become less abundant as you go north up the slopes. Very few species appear to inhabit the dense coniferous forest. One male American Merganser flying down the river. The yeah, yeah, yeah of the Red-breasted Nuthatch often heard in distance. Yesterday one was heard in a tall dead Yellow Pine still standing. The bird seemed 100 ft. to above the ground but couldn't be definitely located.

Went out with Dr Grinnell last evening along his trap line and added more mouse and rat traps to his line of the previous night. For catch on this line May 20 see notes of Dr Grinnell.

In Manzanita bushes on bench west of camp two Bush-tits observed foraging. Were traveling in company with Black throated Gray Warbler. One Bush-tit taken.

Behle
1933

Mad River ford. 2700 ft. above Ruth, Trinity Co. Calif.

May 20

56 ♂ Chipping Sparrow wt. 11.2 grams. Taken by R.M. Gilmore 2 miles up the river. From flock on ground. 2700 ft. altitude. Testes size of a pea ◯ Taken on May 19.

57 ♀ Audubon Warbler. wt. 12.1 grams. Ovary ⁘ Taken on May 19, by R.M. Gilmore 2 miles E of Mad River ford. In Black Oak - altitude of approximately 2700 ft.

58 ♂ Peromyscus truei 200 X 104 X 24 X 20 (crown) wt 31 g.

59 ♀ Peromyscus truei 193 X 100 X 24 X 19 (crown) 2 embs wt. 25.9 g.

60 ♀ Bush tit wt. 5.3 g. Taken in manzanita bush on May 20. Ovary well developed ⁘

May 21.

Last night I added ten more mouse traps to the Grinnell-Behle line and also eight McAbee gopher traps for moles - i.e. one facing either way along the mole runway so that there were in reality four sets. All were in one location about 15 yds apart. Considerable evidence of mole workings. One mole was taken. The mole runs, easily discernable by their pushed up covering, extended out in open spaces between manzanita bushes at the edge of

Behle
1933

Mad River ford, 2700 ft. above South, Trinity County, Calif.

May 21

the second river bottom. In this particular location the runs were very numerous and may have all been made by the same individual.

The additional ten rat traps were placed at the bases of Ceanothus cuneatus bushes and clumps of manzanita in a circular area 75 yards in diameter on the old river bed. There was much sand and gravel all about. Some sign of Dipodomys was noted where small plants had been dug up. The yield of this group was two kangaroo rats. One ♂ taken at the base of a ceanothus bush. One ♂ taken at the base of a manzanita bush.

This trap line which I have been running with Dr Grinnell now totals 75 traps, 40 of which are gov't mouse traps and 35 rat traps. In addition there are the eight mole traps in four sets.

Temperature this morning at 6:30 A.M. was 42° F.

Yesterday afternoon at 5:00 P.M. I ran the trap line of rat traps which had been left baited in hope of catching chipmunks. The yield was four chipmunks, all were taken in or

Behle 1933 Mad River ford, 2700 ft. above Ruth. Trinity Co. Calif.

May 21

beside large logs in the timber. In one instance a ♂ was taken at one end of the log and a ♀ at the other end. The other two were both males.

61 ♀ Chat - Longtailed. alt. 2700 ft. 24 g.
Shot in willow at river edge.

62 ♂ Chipmunk - 151-12-37-17 (stump, crown) 71.6 grams.
Taken in mouse trap along side log on May 20., altitude 2700 ft.

63 ♂ California Jay 90.8 g Taken in Garry Oaks by R. M. Gilmore. Testes large. Size of a pea ◯

64 ♂ Sparrow Hawk. 80.6 g Taken by R. M. Gilmore. Testes small ○

65 ♂ Chipping Sparrow 12.7 g. Testes well developed. Taken in Manzanita bush near river.

66 ♀ Junco - 17.4 g. Taken in mouse trap at base of Ceanothus cuneatus bush close to river. Ovary well developed

Trap line visited at 5:00 P.M. One ♂ Eutamias sonomae taken in rat trap at base of Douglas Spruce where there were many dead logs about.

Behle 1933

Mad River ford, 2700 ft., above Ruth, Trinity Co., California.
May 22

Dr Grinnell ran the trap line this morning and after that we went out together on the morning hunt following west along the river working the open flats between the river and the hills. This open flat floor of the valley represents old river bottom. Its width varies from 100 yards near camp to 1/4 mile farther down the river. Close to the stream are clumps of cottonwoods - Populus trichocarpus - and some willows. Scattered about are single bushes and clumps of Manzanita and Deer brush (Ceanothus cuneatus) Sometimes these two bushes occur side by side. Yellow Pine and Douglas Spruce are to be found near the foothills. The cottonwoods are full of warblers of several kinds - Audubon, Yellow, Alaska Pileolated in great numbers. On the river edges and immediate sand bars are Spotted Sandpipers and Killdeers. Calliope Hummingbirds have established their territories in clumps of manzanita and ceanothus bushes the preferred places being where currant bushes are present. In one such territory Dr Grinnell shot the ♂ the other day and this morning another

had occupied the territory. This I shot and it will be interesting to see if this territory is appropriated by still a third Calliope Humming-bird. One ♂ Rufous Humming-bird was seen this morning in a Manzanita bush. These bushes being in bloom form an attraction for Humming birds.

Feeding out in open grassy places were seen Robins. Juncos. Chipping Sparrows often associated with one another.

One Western Bluebird was surprised from her nest in a woodpecker hole in a dead cottonwood tree. This hole was about 15 ft. above the ground. The ♀ was taken and later the ♂ but the eggs if any have not yet been obtained.

The Monterey Hermit Thrush nest found on May 19 had one egg at 10:00 A.M. The following morning Dr Grinnell visited it and there was still one egg. The nest was not visited on the 21st but this morning had three eggs laid.

May 22

The ♀ was on the nest when I approached. Her bill was resting on the rim of the nest and her big eyes appeared on a level with or just above the rim. Due to crowded conditions her tail was nearly vertical and rested against the rear wall of the cavity. She remained perfectly motionless until I approached to within 7 ft. and stopped to observe her. Then after a moments hesitation she left. The ♂ was somewhere nearby singing.

The following is the census taken from 7:10 A.M. to 9:20 A.M. by Dr Grinnell during our morning hunt: Tanager 4, Black-headed Grosbeak 5, Morning Dove 5, Spotted Towhee 2, Spotted Sandpiper 2, Yellow Warbler 3, Chipping Sparrow 10, Robin 6, Audubon Warbler 1, Alaska Pileolated warbler 3, Western Bluebird 7, Calliope Humming bird 1, Killdeer 2, Hairy Woodpecker 1, Black Phoebe 1, Wood Pewee 1, Purple finch 3, Hermit Thrush 2, Hermit Warbler 3, Crow 1, Steller Jay 4, Junco 14, Linnett 2, Cassin Vireo 11, California Jay 1, California Woodpecker 1, Flicker 1, Unknown 7. 27 species and 82 individuals. Chiefly Riparian habitat.

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1933

Mad River ford, 2700 ft. above Ruth, Trinity Co. Calif.

May 22

67 ♂ Bullock Oriole 36.4 g Testes large

68 ♀ Sierra Junco 15.7 g Ova

69 ♂ Fox Sparrow 33.3 g Testes 9 mm thru.

70 ♂ Hermit Warbler 9.2 g Testes large

71 ♂ Calliope Hummingbird 2.4 g Testes

May 23 -

The Grinnell-Behle trap line this morning yielded the following: Two adult ♂ Neotoma fuscipes, one taken on top log near edge of old river bottom, the other under a manzanita bush at edge of old river bottom at the top of the incline; Two adult Dipodomys californicus, one under a Ceanothus cuneatus bush in the middle of the old river bottom and the second under a manzanita bush on the gravelly bench above the old river bottom; one a ♀ immature Clethrionomys beside a fallen log in dense timber where the location was damp; one ♀ immature Peromyscus maniculatus gambeli taken under a willow near the streamside; one ♀ Peromyscus truei under a small pine tree near the edge of the old river bottom and one ♂ Peromyscus truei under a manzanita bush on the gravelly slope back of camp.

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Mad River ford, 2700 ft., above Ruth, Trinity Co. Calif. 25

May 23.

72 ♀ Alaska Pileolated Warbler 6.1 g ovary ⁘
Taken in cottonwoods near streamside. May 22nd.

73 ♀ Western Bluebird 27.8 g ova ⁘ This ♀ was the mother of the five young taken with the nest.

74 ♂ Chestnut-backed Chickadee 9.5 g. Testes large ○
Taken by R. M. Gilmore in grove of Oaks at bottom of Littlefield Canyon.

In making the rounds baiting the trap line this afternoon one ♀ Eutamias was found at base of small pine tree.

The night before last was a bitter cold night. A crust of ice 1/8 to 1/4" in thickness covered the water basin and at 6:30 A.M. the camp thermometer read 33°F. All day long it was cold cloudy and rained off and on clearing up between spells. Then late in the afternoon it started to drizzle and kept it up steady all night long. Today altho we have had some rain it has been for the most part warm and sunny — the first real sun we have experienced.

In spite of the rain last night the trap line catch was good as

previously recorded. The Dipodomys seemed especially active as indicated by the many little places where they apparently had dug up small weeds. In some instances these rats have been taken under the manzanita bushes but more often under the ceanothus cuneatus. These large spread bushes growing in sandy + gravelly places have lots of leaves under them and some vegetation between the shoots. This bush seems to be the indicator then of Dipodomys habitat in this locality.

The Eutamias sonomae are much more abundant than first appeared. To date I have seen but four yet each day we get catches along the line.

Horse Ridge can be seen when it clears up and it runs in a north north easterly direction. The amount of snow on the summit is surprising and I should not be surprised if it were retarding considerably the breeding season of a good many birds. Yesterday I

May 23.

took a ♂ Fox Sparrow foraging in scrub oak at the base of the foothills near the second river bottom. When prepared the testes were large as if it was ready to breed. It is entirely possible that they have been forced to nest lower down. It is not unlikely that the margin of snow is also the line between Transition and Canadian.

In my walks thru the timber I have seen several fresh deer tracks but have not yet seen one. I also saw what I suspected were bear tracks along a slope just east of Littlefield creek. Gilmore today in that region actually saw the bear and previously Dr Grinnell found bear feces and a bear bed. The feces showed the bear had been eating nothing but grass.

This afternoon with Dr Grinnell I collected the eggs and nest of the Western Blue birds which we located the day before. The five eggs were heavily incubated. A second

May 23 -

bluebird nest was also found near by and taken. It contained five very young birds. The adult ♀ was taken. For full details concerning location, description and measurements of these two nests see Dr Grinnell's notes for this day. The close similarity of these two nests as to location measurements etc. suggests a correlation of blue birds and certain sized and certain located woodpecker holes - probably those of the Hairy Woodpecker.

A pair of Red-breasted Nuthatches have been assiduously chipping away a nesting hole during the past few days in a dead yellow pine. Nearby a Pileated Woodpecker has been tearing to pieces a fallen yellow Pine about 1 ft. in diameter.

In addition to the more common birds around today I heard some Valley Quail calling from the base of a knoll across the river.

At noon while eating a bird was noticed on top of a dead pine some

May 23-

150 ft. high. It departed but soon returned and was watched thru the glasses. It was a ♂ Sparrow Hawk and when shot by Gilmore had the remains of a Black-throated gray Warbler in its mouth. This is the second Sparrow Hawk seen and taken in this locality.

At supper time five Western Kingbirds were noticed by Dr. Grinnell in a flock in the top of a dead tree 150 ft. above ground east of camp.

This morning at 7:00 A.M. while starting out for the morning several Jack Rabbits were noted in the distance. Closer approach showed there were six cavorting around in a gregarious social manner. They scattered in all directions and eluded our efforts to obtain one.

A number of bats were flying about this evening Gilmore and Dr Grinnell both ob-taining specimens.

May 24.

After breakfast went over Gilmore's trap line with him and at 9:00 A.M. started the

May 24 -

ascent to the top of Horse Ridge. We followed the Forestry Service trail up the ridge setting mouse, rat, gopher and steel traps at likely places all along to about 3500 ft. Gopher and mole mounds were observed all the way up but the diggings were not fresh. Along the first two miles there were seen many Audubon Warblers, Black-throated gray Warblers. One Western Flycatcher was taken by Gilmore at about 3000 ft. At one location in a Black oak, yellow pine and Douglas Spruce association 4 Downy Woodpeckers were seen close together working their separate courses thru the trees. One ♂ Sparrow Hawk was seen in the distance and a Blue-fronted Jay heard calling from the bottom of the canyon. Juncos were common from the start of the trip. One Western Tanager was seen at about 3500 ft.

At the branching of the trail we continued to follow the ridge

May 24.

taking the left hand branch, marked Summit trail.

At 4850 ft. the first white fir was noted and also at this point the first snow - a few small rapidly melting banks. Black Oak, yellow pine and Douglas spruce were also in association here. As we sat down to rest a grouse flew from the limb of a black oak nearby and flew down the canyon slope. No feathers were found but it was in all probability a Sierra grouse. One Pileated Woodpecker flew into sight, alighted briefly in a yellow pine and flew on. One Hairy Woodpecker was seen at this locality.

At 5200 ft. the first water was found - a spring seepage from the snows above. In the damp marshy places skunk cabbage was coming in. Black Oaks still large trees were noted here as well as yellow pine. In this locality the timber was thinning out. Birds seen here were a pair

May 24.

of Juncos, a pair of Robins, a pair of Flickers and lower down in the distance a Canadian Nuthatch was heard. A little previously two Turkey Vultures had been seen and three Black-tail deer all probably 4 some no. from birds were in evidence. They were about a 100 yards away and slowly ran away.

At 5400 ft. the slope opened up considerably into open areas with growths of chaparral scattered about. This was probably the beginning of Canadian zone. Two thin lines of White fir extended farther up. Practically all of this stretch from here to the top was covered with banks of snow several feet deep and covering for the most part the bushes. There was patches of chinquapin, a form of Ceanothus called snow brush, a variety of manzanita and some patches of what I thought were birch and alder in the bottoms of shallow draws. Also

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There were patches of oak about 4 or 5 inches in diameter and smaller, probably a dwarf form of black oak. Samples of all these forms were brought back. The buds were just starting to swell. At the edge of the timber three Black-headed grosbeaks were seen, several robins and Juncos in the open places. One squirrell of some sort with a long bushy tail was seen running across the snow far ahead. Where the snow had melted skunk cabbage was coming in in damp places and the ground was matted with old ferns. Many small tracks rather old were seen to run over the snow. The last half mile was all snow with only here and there bushes sticking out. The Ceanothus, manzanita and chinquapin patches were scattered out with little reference to eachother often being side by side. They covered the very top of the ridge to the look out station.

May 24.

The bench mark read 6090 feet above sea level.

The day was sunny, warm and clear and consequently a good view was to be had of the countless ranges one after the other. Most of the South Fork range could be seen to the northwest and snow was along the top ridge as far as & including grouse mountain. Directly north the Salmon Trinity Alps were heavily covered with snow and far off Mt. Shasta loomed up white and high. To the east the Mt Lassen was white with snow as well as another tall cone to the north of it. The Yolla Bolly region was well covered with snow banks. This region was to the southeast. At the southwest Sassie mountain and Mule ridge showed much snow. The snow along South fork mountain and Horse Ridge extended several miles in an easterly direction

Mad River ford, 2700 ft. Above Ruth, Trinity Co. Calif.

May 24.

On the north side of the summit of Horse Ridge the snow was banked 15 to 25 ft. high in places half-covering the Red firs found growing there. A wind was blowing from the south east and the presence of such great banks on the north (much deeper than on the south) would seem to indicate a prevailing wind from that direction. The Forestry people have a road along the ridge of Horse ridge I suppose running to cedar lookout station. No sign of Fox Sparrows was seen. One Aeluspermus gramineus was taken above 5000 ft. One Turkey Vulture flew over the top of the ridge.

On the way down again two more Sparrow Hawks were seen and at 5300 ft. half a dozen Wood Pewee's in a Black Oak, yellow Pine Douglas Spruce association.

All along I was continually impressed with the lack of birds and mammals especially. There is apparently very little of

the Canadian zone and that almost entirely covered with snow so the typical animals are not present. Only James's were there. These incidentally were found from the river to the summit. The depth of snow at the top was to me astonishing and surely will remain till mid July in places. The drainage on the Mad River side is very steep practically all the way. Three deer presumably the same three were seen on our return trip. From a collecting standpoint the trip was a total loss but it served to get a knowledge of zonation, the vegetation and stage of spring development. The one fresh gopher workings was found at 5200 ft. near the spring. Fresh and old coyote feces were found in the trail up to 4800 ft. Four different piles were fresh.

May 25.

Ran Gilmores trap line this morning with the following results: one adult ♂ gopher; one immature gopher, one ♀ Eutamias sonomae on log up side canyon; one ♀ P. m. gambeli (no embryo's - Discarded); one Gerrhonotus taken in trap at waters edge.

One Jack rabbit seen. Black-headed grosbeaks seem very numerous around the barn below our camp and a great many Western Kingbirds are foraging along the old river bottom.

75 Gerrhonotus. wt. —— Taken in mouse trap 1 mi. up side canyon below camp.

76 ♀ Western Kingbird wt. 38 grams - Taken from Willow in second river bottom. Ova ○○

77 ♀ Black-headed Grosbeak - wt 41.6g. Ova ○○○○ Shot on ground on slope at base of a scrub oak bush.

78 ♂ Western Wood Pewee 15.3g. Testes ○ Taken at 5200 ft. on Horse Ridge by R. M. Gilmore on May 24th.

May 26.

Twelve rat traps set last night at the bases of large Black Oak and Douglas Spruce trees caught but one Neotoma fuscipes. Four other traps

May 26.

were sprung and showed hairs on the wires from mice. Traps were baited with prunes and rolled oats.

This morning with Dr Grinnell drove to Three Forks of Mad River stopping at Anderson Ranch briefly. Three Forks is 7.6 miles above our camp and 16 miles from Ruth. Trails from here lead to Waterspout, 7 miles, (6 miles to Waterspout Ranger Station) to Cold camp 7 miles and to Covelo in a southeasterly direction and to Hayden place, Jones Ridge Trail, 2 miles and Rock Creek 7 miles in a southerly direction. The main fork of the river comes in from east, a second from the south and the third from the north east.

In general conditions are similar to those surrounding our camp. Near the stream are cottonwoods and willows and farther back the oaks and conifers. Here and there are small grassy meadows. Search revealed no signs of Microtus. They are the wrong kind of meadows with the grass stems far between, the soil sandy & rocky and undoubtedly they dry up in the summer ~~and fall~~. All habitats and birds are the same as around our camp.

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Mad River ford, 2700 ft. Above Ruth, Trinity Co. Calif.

May 26 -

79 ♀, Calif. Purple Finch 22.7g. Ova ⁰⁰⁰.
80 ♂, Calif. Purple Finch 21.6g. Testes 7 mm's across ○
These two birds taken by Gilmore in yellow Pines at camp.

May 27 -

The 12 rat traps baited with prunes and rolled oats and set at bases of Black Oaks and Douglas Spruces in a circuit north of camp caught last night one ♀ Neotoma fuscipes with no embryos (destroyed); one ♀ P. truei with no embryos (destroyed); one ♀ P. truei (saved) with no embryos. This last one was caught in a trap set 6 ft. from the ground in a crotch.

Last night there were many large Hoary bats in flight around 8:00 P.M. Their presence had not been noted any other evening. Possibly a migration. They were flying high chiefly over the river. Five in all were taken, I shot one - my first bat.

One adult bush rabbit was seen to run along the edge of a large dead stump in an open space some 20 ft. from water.

At supper time last night two

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Mad River ford, 2700 ft. 8 mi. above Ruth, Trinity Co Calif. 37

May 27.

hawks, probably Western Redtails were seen flying around the tree tops undergoing aerial maneuvers and occasionally uttering piercing shrieks.

Hermit Thrush nest under observation despoiled as recorded in Dr Grinnell's notes.

Last night while the bats were flying half a dozen Violet-Green Swallows were also actively in flight above the river catching insects and competing with the bats.

√81 ♀ Peromyscus truei 185-92-23-26 (no embs.; crown) 24.1 g

√82 ♂ Peromyscus m. gambeli -156-68-20-16 (crown) 20.5 g

·83 ♂ Nycteris cinerea 129-54-9-9 (crown) 19.8 g.

· 84 ♀ Red-breasted Sapsucker. 52.6 g Ova ○

Probably laid several eggs already.

· 85 ♂ Audubon Warbler - 14.8 g. Testes - ○

Taken in cottonwood beside stream.

86 Rana Taken in small stream N of camp.

√ 87 ♂ Yellow Warbler 8.6 g

√88 ♀ Sciurus griseus 590-280-82-27 912 grams. Taken by Gilmore on ground among conifers on trail just back of camp.

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Mad River ford, 2700 ft. above Ruth, Trinity Co. Calif.

May 28

89 ♂ Fox Sparrow 34.2 g Testes ⬭ Taken By R.M. Gilmore on Horse Ridge on May 27th at 5500 ft. (See Gilmore note book for description of habitat.)

90 ♂ Fox Sparrow 36.5 g Testes ⬭ Taken by Gilmore on Horse Ridge, May 27th, 5500 ft. (As above for habitat.)

91 ♂ Green-tailed Towhee 27.5 From Horse ridge, 5500 ft. May 27, 1933 - By R.M. Gilmore. As above for habitat.

92 ♀ Kangaroo Rat - 286 - 168 - 42 (no embs.) - 16 65.6 g Taken on island in small stream under log where high + dry.

93 ♂ Wood Rat - 424 - 196 - 39 - 29 248 grams 5500 Horse ridge - Taken by Gilmore (See his notes for habitat.)

94 Gerrhonotus Taken in damp mossy area heavilly shaded + with many fallen logs - 50 ft from water.

95 ♀ Eutamias sonomae 246 X 102 X 37 X 19 86.6 g Under Douglas Spruce - on ground. This chipmunk taken on ~~eyes~~ afternoon round of trap line of Grinnell and Behle.

May 29

96 Western Yellow-bellied Racer - Taken on north side of river in shaded

May 29.

area among grass and sticks.

97 ♂ Neotoma fuscipes 388·184·41·24 281.2g

Taken on ground at base of black oak amid dense timber. Heavilly shaded. No nest in sight.

98 ♀ Wood Pewee 11.8g Ova Shot from cottonwood

99 ♀ Eutamias sonomae ? 244-110-36-16 61g.

Horse Ridge at 5500 ft. SE Ruth, Trinity Co., Calif. Taken by R. M. Gilmore - In timber.

100 ♀ Peromyscus m. gambeli 174·69·20·19 20.3g.

Horse Ridge at 5500 ft. SE Ruth, Trinity Co - California. Taken in Gilmore's trap line in the dense timber.

101. Garter snake caught in mouse trap, at waters edge beside large rock.

Trap line of Grinnell and Behle (81 traps) caught this afternoon one Sorex trowbridgii under 3 ft. log 25 ft. from water - damp + mossy. Caught in same trap and same place as previous shrew on this line; one garter snake (above) and one Sceloporus occidentalis taken in mouse trap at waters edge among dry litter and leaves (Destroyed)

Mad River ford, 2700 ft. Above Ruth, Trinity Co., Calif.

May 29.

Went across the river where I had noticed many jackrabbits. Area there flat like on our side with ceanothus and manzanita bushes on old river bottom and scattered bunches of cottonwoods. Small stream west of Duff's ranch enters Mad River. At this point many clumps of willows. Forest comes down to within 50 yards of stream. Digger pines there at base of abrupt knoll. Presence of many birds noted - an unusual number as to species and individuals altho no census was taken. Wood pewees, Robins, Purple Finches, Bush-tits, Cassin Vireos, ♂ Black-headed grosbeaks, one ♀ Calliope Hummer, Flicker, were seen, Quail heard in the distance and one Lazuli Bunting seen. Sceloporus occidentalis were active, one observed on trunk of Douglas Spruce 10 ft. above ground. One Western yellow-bellied Racer was found. One ♂ Jack rabbit was killed. Along the bank of the river along drift wood and logs about a dozen Mud turtles were seen.

A few days ago a robins nest was observed along the trap line being constructed apparently since there was

May 29

a still wet layer of mud lining the inside. Much lichen from nearby trees hung from the outside. The nest was situated on the upper surface of a bent 2" Garry oak and supported by dead little side branches. At no time while making the rounds of the trap line in the mornings and evenings did I ever see the birds near. This morning there was a lining of soft fine grass as I felt in the nest. When do the birds work on their nest.?

Last night while looking for bats saw one adult bush rabbit run along side dead log and in a hole near the roots. This was the same performance as observed once before. A trap placed there caught one ♀ P.m. gambeli.

Few bats were seen and these were all myotis. Not a hoary bat appeared which strengthens my belief that the five were taken on a migration thru this country.

May 30.

√102 ♀ Glaucomys sabrinus 299-143-40-19 141.8g. Taken at base of yellow pine in heavy shaded timber back of camp. Trap baited with prune, peach, & rolled oats.

May 30 -

Broke camp shortly after noon and drove to Wilders ranch where we spent the night. Last night (evening of May 29) while eating we saw a Sharp-shinned Hawk flying and soaring above the trees north of our camp. This is the first one seen by any of us.

May 31.

After breakfast started on our way to Grouse mountain via Eureka, Arcata, Blue Lake, to Willow creek Ranger Station. After securing what information we could went back to top of divide and took narrow tortuous road that follows up along the ridge. Due to heavy large snow banks, we were able to get to Horse Mountain, approximately 9 miles in a direct line from Grouse Mountain and 4 miles this side of Cold Springs. Seems to be an unusual amount of snow this year. We were told that by the 15th of May last year one could get all over the range & drive to Grouse mountain; yet this year at this time the snow is banked up four and five feet deep.

June 1 -

103 ♀ Blue-fronted Steller Jay 118.7g. Shot in dense timber at bottom of gulch. 4700 ft. Ova (one) O Front of breast muddy as though it were building a nest.

104 Sceloporus graciosus 5000 ft.

105 ♀ Audubon Warbler - 13.0g - ova ⁘ Taken from lower branches of Douglas Spruce.

106 ♀ Wright Flycatcher 10.8g ova ⁘ Shot from small yellow Pine above clump of Manzanita at 5000 ft.

June 2 -

15 rat traps and 35 mouse traps set last night over 1/4 mile of ground in heavy timber. Placed in Huckleberry Oak thickets, rock outcroppings, bare forest floor, on dead fallen logs and under them, in damp mossy places and at bases of living Incense cedars and Douglas Spruces, brot: 1 ♂ Peromyscus maniculatus rubidus taken from shallow depression at base of Incense cedar where the dirt was dry; 1 ♀ Peromyscus maniculatus rubidus from under large Douglas Spruce log where it was dry +

June 2.

the earth covered with litter of pine needles and small twigs; 1 ♀ immature Peromyscus maniculatus rubidus from under a large Douglas Spruce log in a cavity or sheltered place formed by the bark. It was damp inside; one ♂ Neotoma fuscipes fuscipes, under end of large log, probably Douglas Spruce. No nest around. All around was a small stand of Douglas Spruce; 1 ♂ Neotoma f. fuscipes from beneath a large overhanging rock upon which its nest was built. The pile of sticks rose three feet above the large rock. The rock itself was situated in the midst of a dense Huckleberry Oak thicket; 1 ♂ Neotoma f. fuscipes from the top of its nest which was built up 2½ ft. above the ground and extended beneath and along side a large Douglas Spruce log for 15 ft. None of the water sets had been touched and few of the mouse trap sets. All these specimens (3 Wood rats and 3 P. m. rubidus) were taken at the same altitude - 4600 ft.

Cold last night and some evidence of freezing. Temperature reading this morning was 31° F.

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Horse Mt. 4700 ft. Humboldt co., California. 47

June 2 -

9:30 A.M. While following along an old mine road heard a pounding in distance as though a wood-pecker were busy. Pounding was intermittent. Traced it and found it was coming from the center of a dead tree along side the road 150 ft. from where I had first heard the sound. Strewn over the ground at the base of the dead tree were chunks of dry half-rotten wood of all sizes the largest being two inches long and 1/2" thick. Located about 25 ft. from the ground and on the east side is the newly cut hole perfectly round and appears to have a diameter of two inches. It is 2" below the stub of a former branch. The hole is some 15 ft. from the top of the tree. Old dead branches are found above the nest and mainly at the top and the trunk below the hole is smooth and free from branches. To the north of the hole 1 1/2" is a small beginnings of a hole and has a diameter of 1/2" I judge. The ground is mostly covered with banks of snow but in the open places there is a lot of Huckleberry oak growing in bush form. The nearest

tree to this dead one is a Yellow Pine and this kind is dominant in the surrounding area altho there is also present Douglas Spruce and Incense Cedar. The nearest tree is about 15 ft. away to the west. This old dead tree is probably a yellow Pine. It is entirely stripped of bark and has some lichen on it.

The pounding continued at intervals for about five minutes then a head and long bill was exposed. A red stripe on the chin was noticeable and I assumed it was a ♂ Flicker. The bird remained thus with its body inside the tree and head pushed thru the outside and it appeared to have an expectant attitude. The eyelids could be seen to blink constantly. Two Juncos calling nearby made the bird more attentive and the head was cocked a trifle to the side. After five minutes of this watchful waiting the bird emerged and flew to the trunk of the nearest tree picked a few times at something on the bark, flew to an outstretched branch, remained a second and flew to a nearby White Pine where it remained

June 2 -

a minute or two. It was unquestionably a ♂ Flicker. The white rump patch showed conspicuously in flight as did the reddish under surface of the wings. The breast seemed heavily blotted with black against a grey background and the black throat or breast patch showed up strikingly. The bird was shortly joined by its mate, a seemingly larger bird that sailed in from the N.E. They stood side-by-side and appeared to rub bodies and heads together then the first bird flew off down the hillside out of view followed by the second bird. Once from a distance shortly after a call was heard. Half an hour lapsed and they didn't return to the hole. The altitude here is about 4850 ft.

107 ♂ Western Bluebird 25.8 g Testes ◯
Taken from yellow pine 5000 ft.

108 ♂ Western Tanager 19.6 g Testes ◯
Shot from Incense Cedar 5000 ft.

✓ 109 ♀ Peromyscus maniculatus rubidus
155-68-20-16 16.0 g Taken under log in damp hole made by bark. 4600 ft. No embryos.

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1933 -

Horse Mt. 4700 ft. Humboldt Co., Calif.

June 2 -

110 ♀ Peromyscus maniculatus rubidus
156-64-19-14 14.5g No embryos -
Taken at 4600 ft. under Douglas Spruce log where fairly Dry.

111 ♂ Peromyscus maniculatus rubidus
169-75-19-14- 18.8g. Taken at base of Douglas Spruce in small dry cavity 4600 ft.

The hole to the Flicker nest in construction as I have mentioned was situated on the east. This afforded the birds a clear unobstructed approach free from trees and gave them a large clear view. This may be the reason for the location of the hole.

Followed this morning along a ridge to a point where I could look down over the country we had previously traversed. Our camp is located in a dense stand of timber comprised of yellow Pine, Incense cedar, and Douglas Spruce and a little farther up the slope is to be found White and Red Fir. Sugar Pine is also to be found around, + Jeffrey Pine; Huckleberry Oak is quite common, more

June 2

often in bushy stands but in the bottom of some draws and around rock outcroppings attains a height of seven feet. Three kinds of manzanita have been noted and one form of ceanothus. Few flowers are in bloom. One gets the impression that spring is just approaching. The summit of Horse Mt. is heavilly covered with snow banks especially on the north side. Evidence on tree trunks indicates the snow was about six feet deep last winter. The drifts now are 3 + 4 ft. deep.

Down below camp at I judge 3700 ft. there is a large open area appearing very green and along the western margin is a grove of oaks which extend up the ridge upon which I was several hundred feet.

June 3 -

Last night cold. Early in the evening the clouds and mist settled down over camp but later on during the night it became perfectly clear with a cold wind blowing. The temperature

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June 3.

at 4:45 A.M. was 35°F

80 traps (50 mouse and 30 rat) but one ♀ Neotoma ♂ fuscipes taken on rocks in dense Huckleberry oak thicket 10 ft. from nest. [The ♂ was taken here last night]; one ♂ Peromyscus maniculatus rubidus taken among litter of bark, pine needles and small sticks in bottom of small dry wash; one Sorex trowbridgii? taken in small cave at base of rock among Huckleberry oaks and nowhere near water altho the habitat was damp.

The yield is very poor. There is no vestige of vegetation on the forest floor but woodrat nests are numerous.

I saw very few birds in my walk yesterday there being one Western Robin, 3 Audubon Warblers, 1 Western Blue bird, 1 Mountain chickadee, 3 Oregon Juncos, 2 Red-shafted Flickers, 4 Western Tanagers, 1 Golden Eagle, 2 Blue-fronted Stellar Jays; 1 Raven 1 Wright Flycatcher.

Other birds seen at this locality so far are: Hairy Woodpecker; Townsend Solitaire, Sooty Grouse, Olive-sided Flycatcher

Behle 1933 Horse Mt. 4700 to 5000 ft. Humboldt Co. Calif. 53

June 3 -

Cassin Purple Finch, Red-breasted Sapsucker, Red-tailed Hawk, Canada Nuthatch, Green-tailed Towhee, Dove, Hermit Thrush, Wood Pewee. Chipmunks have been seen, fresh deer tracks + turds, and rabbit droppings

On June 1, a golden eagle was flying slowly overhead being harried by a hawk probably a red-tail. The Hawk would fly higher and swoop down making a pass at the eagle which seemed unperturbed but would bat out with a wing or turn slightly on its side. It gradually flew higher and passed over the mountain. The same eagle presumably has been seen soaring around several times since.

Early this morning while bitter cold a Hermit Thrush was steadily singing its flute-like notes.

112 ♀ Blue-fronted Steller Jay 127.4 g Ova ◯ Ready for laying. Shot from Douglas Spruce. 4700 ft.

113 ♀ Oregon Junco 17.4 g Ova ° Shot from small Douglas Spruce. 4600 ft

114 ♂ Oregon Junco 18.3 g Testes ◯ As above. mates

June 3.

✓115 ♂ Chipping Sparrow. 12.3g Testes ○ Taken from top of Douglas Spruce at 4000 ft.

-116 ♂ Western Robin 87.5g Testes ○
4000 ft. From garry Oak.

-117 ♀ Neotoma f. fuscipes 368-174-41-26 185.1g
No embryos - near nest in Huckleberry Oak + rocks - 4650 ft.

Trap line this afternoon yielded one ♂ Eutamias townsendi ochrogenys at base of Douglas Spruce in heavy timber. and one ♂ P. m. rubidus under overhanging rock where the ground was damp. 10 ft. from water.

Walked down to open country below camp this morning. Noticed two grouse eggs laying in the middle of the road where a newly fallen Douglas spruce had once been before being cut away. Search revealed under the limbs of the portion of the tree that had been dragged to one side one more intact egg and one broken. Undoubtedly the grouse had started to lay her eggs under this fallen tree but the nest and contents were semi-destroyed when the tree was cut to clear the road. We had

June 3.

been told that the Topographical Survey people had been along here about three weeks ago. The eggs when blown were fresh, + the 3 were saved. In the surrounding locality grouse were continually booming.

3 grouse eggs saved.

In the open country from a distance three Citellus douglasii were seen to run toward rocky prominences. One Sciurus griseus was taken from a Black Oak tree. Chipping Sparrows, Juncos and Robins were the only birds seen and they were quite abundant. One robin nest was found in the lower branch of a Douglas Fir some 4 1/2 ft. above the ground. It contained three eggs.

In two instances gopher holes were found with the entrance plugged up with fresh dirt. There was no surface evidence, no mounds to be found anywhere.

Search of two shacks did not reveal sign of any bats.

Posted on a tree at the right hand side of the road beside a gate across the road was tacked a cloth notice,

June 3 -

badly tattered and undoubtedly posted last year. It reads as follows:

United States Department of Agriculture
Bureau of Biological Survey.

Warning — Poison
Owners of Dogs Please Take Notice
Poison baits are distributed in this locality under the direction of the United States Bureau of Biological Survey in order to destroy Wolves, coyotes, and other predatory wild animals. This work is in the interest of protecting live stock and game and is of especial importance in conserving our meat supply.

You can assist greatly if you will keep your dog out of danger.

The public is warned that theft of poisoned predatory animals, interference through placing steel traps around poison baits is unlawful and persons committing such acts will be dealt with to the fullest extent of the law.

June 3.

Immediately beneath the notice in English the words of which I have copied is a repetition of the same in Spanish.

Considerable mole workings are to be found about the country.

A White-headed Woodpecker was seen from camp to day.

From the appearance of the mole mounds it would seem that the creatures are active all winter and come up to the surface beneath the snow for short excursions as contrasted with the gopher which travels long distances beneath the snow on the ground surface. In setting for moles earthworms were found.

June 4.

The trap line of 80 traps (50 mouse and 30 rat and 2 mole sets) this morning brot: 1 ♀ Peromyscus m. rubidus from under Huckleberry Oak bush where there was dry litter of leaves and pine needles; 1 ♂ P. m. rubidus from inside cavity at base of Douglas Spruce the floor being covered with dry wood dust; 1 ♂ P. m. rubidus

June 4-

from a small cave under overhanging rock, the soil there being damp; 1♀ Neotoma f. fuscipes at base of overhanging rock upon which a huge nest had been built and situated in the midst of a dense thicket of Huckleberry Oak. [A ♂ was caught in this same place two days ago and yesterday a ♀ in a trap 10 ft. away in the same thicket]; 1♀ Neotoma f. fuscipes at end of old rotten log some 30 ft. from nest; one ♀ Eutamias townsendi ochrogenys taken in mouse trap in litter of small twigs at base of Douglas Spruce; The total caught then was: 3 P. m. rubidus, 2 Neotoma f. fuscipes, and 1 Eutamias t. ochrogenys.

While running the trap line 1 ♂ Sciurus douglasii was shot in Douglas Spruce and shortly after a ♀ was shot some 20 ft. away also from a Douglas Spruce. This is undoubtedly a pair.

Close by a Sciurus griseus was seen so these two species overlap here at 4600 ft.

Temperature this morning at 4:45 AM was 46°F and it was somewhat cloudy. Quite noticeable was the singing of Tanagers

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Horse Mt. 4700 - 5000 ft. Humboldt Co. Calif.

June 4 -

118 ♂ Eutamias townsendi ochrogenys
255 - 108 - 38 - 18   102.4 g   4650 ft. Under Douglas Spruce. Taken June 3.

119 ♀ Eutamias townsendi ochrogenys
262 - 115 - 37 - 14.   81.9 g   4700 ft. Under Douglas Spruce - No embryos.

120 ♂ Sciurus douglasii 321 - 122 - 51 - 15 - 229.2 g.
4650 ft. In Douglas Spruce.

121 ♀ Sciurus douglasii 337 - 137 - 53 - 17   226.9 g.
as above - mates.

122 ♀ Neotoma f. fuscipes. 415 - 203 - 41. 25   252.6
4650 ft. No embryos.

123 ♀ Neotoma f. fuscipes 408 - 197 - 39 - 26 - 238.8 g
4650 ft. No embryos.

June 5 -

80 traps (50 mouse and 30 rat) got nothing last night. An additional ten mouse traps placed in a marshy area in the open area at approximately ~~3900~~ 4100 ft. got one ♀ Microtus oregoni: This area some 50 ft. X 20 ft is formed by a small seepage stream and is characterized by large dense clumps of sedge thru which numerous runways go. Fresh sign was found in some places consisting of fresh turds and 1" pieces of freshly cut

June 5.

grass.

124 ♀ Microtus oregoni ? 142-36-19.9 no. embryos. 34.7 g 3700 ft.

125 ♂ Neotoma cinerea 351-162-43.25 192.1 g.
4700 ft. as below.

126 ♀ Neotoma cinerea 352-173-41.24 166 g.
No embryos. Taken by R. M. Gilmore. In Huckleberry oak + manzanita brush near rocks at edge of timber. 4700 ft.

127 ♂ Neotoma cinerea 396-182-42-27- 246 g.
as above - 4700 ft.

128 ♀ Red-breasted Sapsucker - 58.3 g. Ova large about ready for laying. Largest measure 9 mm. in diameter. Taken at 4700 ft. on trunk of Douglas Spruce in dense forest.

129 ♂ Wood Peewee 13.6 g Taken by R. M. Gilmore on Horse mt. 5000 ft - on snag of Douglas Spruce.

130 ♀ Sciurus douglasii - 325-134-49-16
211.2 g. No embryos - Shot at 4600 ft. from Douglas Spruce.

June 6 -

131 Western yellow-bellied Racer. Taken at 3700 ft. in open meadow among weeds + grass - June 5th.

80 traps (50 mouse and 30 rat) last night
got 1 ♀ Peromyscus maniculatus of rubidus

from ~~on~~ top of wood rat nest built on rock among Huckleberry Oak; and 1 ♂ P. m. rubidus beside log in moist damp situation. Both were taken at about 4600 ft.

Twenty three mouse traps set in clumps of scirpus in two swampy areas in the open country below camp. but one ♂ Microtus oregoni and one ♂ immature Microtus oregoni and one ♀ Sorex vagrans. Several other traps were sprung and fresh turds noted on some of these.

I took the barometer down and the altitude reading was 4100 ft. I had previously called this an estimated 3700 ft.

A large flock of sheep is foraging over the country down there.

132 ♂ Microtus oregoni ? 150-43-20-9 37.8g
4100 ft.

133 ♂ im. Microtus oregoni ? 113-29-18-8 18g 4100 ft.

134 ♂ Peromyscus m. rubidus 175-82-21-16 21.6g 4600 ft.

135 ♀ P. "m. rubidus" 153-66-21-16 20.7g "

136 ♀ Oregon Junco 22 g. Ova large - largest one 7 mm. in diameter 4600 ft.

137 ♂ Hairy Woodpecker. 74.8g. Testes ○
Taken by Gilmore 5000 - on dead Yellow Pine

Horse Mt. 4700 ft. Humboldt Co. Calif.

June 6 -

138 ♂ Green-tailed Towhee 27.6 g. Taken by Gilmore from shrub at 5000 ft. in open country and scattered timber Testes large - ◯

139 ♀ Seiurus douglasii 341-137-51-17 229.29 No embryos - Taken by Gilmore at 5000 ft. from Douglas Spruce in dense timber.

23 mouse traps set in Microtus runways in clumps of scirpus in marshy area at 4100 ft. this afternoon brot: 3 im. Microtus oregoni ? each of which was so badly chewed up and semi-destroyed by beetles, ants and possibly other microtus that they could not be sexed or saved.

8 gopher traps in 4 sets brot one ♂ im. Thomomys monticola. This came from the same set that an adult had previously been taken from.

June 7 -

80 traps (30 rat and 50 mouse) this morning brot: 1 ♂ Neotoma fuscipes (not saved) from top of large log under and around which a nest had been built; one ♀ Sorex trowbridgii from under a large Huckleberry oak on a dry steep slope some 25 yards from the

nearest water; one ♀ Clethrionomys from under thicket of Huckleberry oak where there was a dry litter of leaves, small sticks and needles.

The 23 microtus sets failed to bring anything this morning. The 4 Gopher sets got one ♂ Thomomys monticola at an altitude of 4100 ft.

140 ♂ Blue-fronted Steller Jay. 112.5 g Taken by Gilmore at base of burnt log ~~5000~~ 4700 ft. Testes small ○

Broke camp at 11:30 driving down the ridge road to highway thence to the Salyer Ranger Station where information was obtained regarding Hupa Mt. and the road to Hooker Ranch. Drove to Weitchpec via Hoopa valley. This valley does not appear to be good Upper Sonoran, it is rather Transition with some Upper Sonoran vegetation. Digger Pines were for the most part scattered and few - but one pure stand was noted near the Indian Reservation buildings. At the South Fork of the Trinity River it was noted that the main Trinity River was extremely muddy

June 7-

from Hydraulic mining operations up the river. At Weitchpec an Indian said the salmon ran regularly up the river in spite of the dirt loaden water only they couldn't see to spear them.

We crossed the Klamath River at Martins Ferry and proceeded up to the top of the ridge. This is our "Yolla Bolly to the sea" ridge. The forest is very impressive being of Douglas Spruce and Tan Bark Oak essentially with other trees scattered about such as madrone, maples, garry Oak etc. The Spruces attain huge size & have an orange or salmon colored center. The floor vegetation is dense. Here as in other parts of the coast Fog belt lichens are conspicuous hanging in wisp-like clumps from trees. One is impressed with this luxuriant forest produced by these humid conditions.

June 8-

After driving to locked gate at the old Hooker, now the Stover, Ranch returned

June 8 -

to our location and made permanent camp. We are located on top of the ridge near Coyote Peak at an elevation of approximately 3000 ft. According to our map we are located 16 miles by airline directly east of Patrick's Point on the Pacific Coast. The property here belongs to A. E. Lyons. We met his daughter herding sheep last night and she said Coyotes had been killing lambs. The government men had not been engaged in control work here for some time

June 9 -

50 traps (40 mouse and 10 rat) set last evening brot 1 ♂ Peromyscus m. rubidus from small cavern at base of Douglas Spruce; 1 ♀ Peromyscus m. rubidus from under large fallen log on NE facing slope; 1 ♀ Sorex trowbridgii from little mossy nook under fallen log near bottom of gulch. These 3 specimens were all taken at about the same altitude - 3000 ft.

Since our arrival at this location

Coyote Peak, 3000 ft, Humboldt Co., Calif.

June 9-

the fog has been exceedingly thick. The trees are dripping steadily as though it were raining and at times it does drizzle. The water soaks into the ground immediately. One can scarcely find a dry place to set traps. Under such conditions little has been seen or heard of birds. Early yesterday morning at 4:45 A.M. during a brief clear spell Tanagers and Robins were heard singing and last evening two Hermit Thrushes burst into song. I have heard Canada Nut hatches and Steller Jays so far and some Doves were observed along the roadside as we first drove in. Gilmore reports having seen a Mt. Quail

141 ♀ Peromyscus m. rubidus 169-78-20-15 19.2g. No embryos - 3000 ft.

142 ♂ Peromyscus m. rubidus 181-92-21-16 23.4g 3000 ft.

143 ♀ Sorex trowbridgii No embryos. 111-50-14-5 6.7g 3000 ft.

144 ♀ Oregon Junco 17.8g Ova 80 Probably a sitting bird as indicated by the belly patch.

June 10.

145 Salamander - Taken in between roots of upturned tree where soil was damp. 3000 ft. Taken June 9.

In rebaiting trap line yesterday (June 9) one ♀ ad. Eutamias townsendi found in mouse trap at bottom of shallow draw under overhanging bank and roots.

Trap line this morning (40 mouse and 10 rat) brot one ~~sx?~~ ♂ ad. Peromyscus m. rubidus from small hole at base of Douglas Spruce where it was dry; one Clethrionomys californicus from under log among damp litter of leaves of oaks, ferns + pine needles, the same material overhanging and the whole being quite damp.

I am inclined to believe that the steady drizzle + fog are inhibiting the activity of mammals as well as birds.

146 ♂ Chipping Sparrow 12.1 g Testes ⬭ Shot from Garry Oak isolated in meadow.

147 ♂ White-crowned Sparrow 25.8 g Testes ⬭ Taken from bushy oaks in prairie at an elevation of 3000 ft.

June 10

148 ♂ Lazuli Bunting 14.8g Testes ○ Taken at 3000 ft from bushes in open flat - in association with White-crowned Sparrows.

149 ♀ Steller Jay. 115.1g Ova 88 Taken at 3000 ft. from Douglas Spruce in dense timber.

150 ♂ Steller Jay 118.3g Testes small ○ Taken as above - mates or at least together.

One ♂ ad. Eutamias townsendi found in rat trap this afternoon on slab of bark beneath large log lying across gully at the very bottom.

The misty drizzly weather changed to day after a 48 hour siege of continual precipitation. Altho still foggy this morning we experienced some sunshine this afternoon and this evening is quite clear. Throughout all the stormy spell the temperature hovered constantly at 50°F

Went out with Dr Grinnell this morning from 7:30 to 11 A.M. for the purpose of scouting the country. However the fog still remained and the

visibility was poor. We were unable to see Coyote Pk (if it be outstanding) Our walk was confined to open prairie just skirting the forest in places. The prairie is on top of the Bald Hills which are a continuation of the "Yolla Bolly to the sea" range and probably so named because of the characteristic open "prairie" aspect. They are all of an altitude of about 3000 ft. and follow along the top of the ridge. Grass is thick and covers the whole (sheep being kept off evidently) Shallow cuts and draws are numerous and in some of the deeper ones where seepage water is present patches of round bladed marsh grass are present. Here Microtus sign is numerous. Occasionally there are isolated clumps of Garry Oak or lines of these extending out into the open from the woods. There appears to be then a forest habitat, a open prairie habitat and a

[illegible]

[illegible]

[illegible]

marsh habitat.

The drainage of this ridge at this point is to the Klamath River on the east via Pine Creek and to the west the drainage is into Redwood Creek.

The following birds were observed from 7:30 to 11:00 A.M. or heard — Sooty grouse (two heard and two flushed at edge of timber); Canada Nuthatch; Oregon Junco (quite common at edge of road and seen in bushes adjacent); Western Tanager (singing from high in the tree tops); Hermit Thrush; Mt. Quail; Savannah Sparrow (in open prairie from which they flew to bushes or Garry Oaks); Flicker; California Woodpecker; Pine Siskin (in flight overhead); Steller Jay (in timber near edge) California Purple Finch (in bushes and Garry oaks at edge of prairie); Western Robin; White crowned Sparrow (in and around bushes generally at edges of prairie or where arms of bushes extended out); Chipping Sparrow (in bushes and Garry

oaks both isolated and at edge of timber); Black-headed Grosbeak; Meadowlark [in grass in prairie from which is flew to fence posts and isolated trees]; Band-tailed Pigeon [5 seen in flight]; Lazuli Bunting [appeared to be the most common bird usually in bushes at edge of clearing but also in isolated clumps of trees and in arms of vegetation. Often in association with White-crowned Sparrows].

Some gopher diggings were found with evidence of recent activity. Mole hills were very common with no particular place of occurrence. Microtus runs common in marshy areas; two Jack rabbits were seen at edge of prairie evidently a pair the ♀ I shot; Citellus were numerous and often seen far from their holes. Evidence of their digging and foraging was seen across frequently. One Sciurus douglasii was taken by Dr Grinnell from lower limb of Douglas Spruce at edge of

timber;

Clear in the evening with some sun filtering thru the trees. Birds in a burst of song. one different bird not mentioned yet was a Russet-backed Thrush. In the afternoon a Raven perched in a dead tree 150 ft. above ground, called a few times preened a little and flew away. Last evening at 6:45 a Horned Owl was heard briefly.

One shallow pond in the prairie this afternoon was seething with Hyla Tadpoles and two adult Hylas were taken nearby.

The clear fog-less conditions this evening are quite in contrast to the dripping soggy conditions of the past two days during which time every tree, every bush and plant was soaked and dripping. A road worker who claims to have lived around here 11 yrs said such long unbroken spells of fog and rain were very rare. I have noted

little run off however, only occasional seepage areas.

June 11.

Day clear and sunny. Temperature at 7:15 is 53°F. Slight wind from north.

Trap line this morning [40 mouse 10 rat and 1 steel] brot ① ♂ad Peromyscus m. rubidus at base of Douglas Spruce at bottom of wash and among comparatively dry litter of bark scales needles + small twigs (not saved); ② ♂ ad Peromyscus m rubidus from under old moss-covered log, no litter just bare dirt and small holes going further under log.

151 ♂ Chipping Sparrow - 12.3 g Testes ○ Taken by R. M. Gilmore from [on edge timber] Garry Oak.

152 ♂ Pine Siskin 11.0 g Testes ○ Taken by Dr. Grinnell from Garry Oak on bald side of ridge 3000 ft.

This morning set out 8 gopher traps in 4 sets and this afternoon they brot ① ♂ ad. Thomomys bottae from a set down in pocket of prarie ② ♂ ad. Thomomys bottae some 50 yards from the 1st one;

June 11-

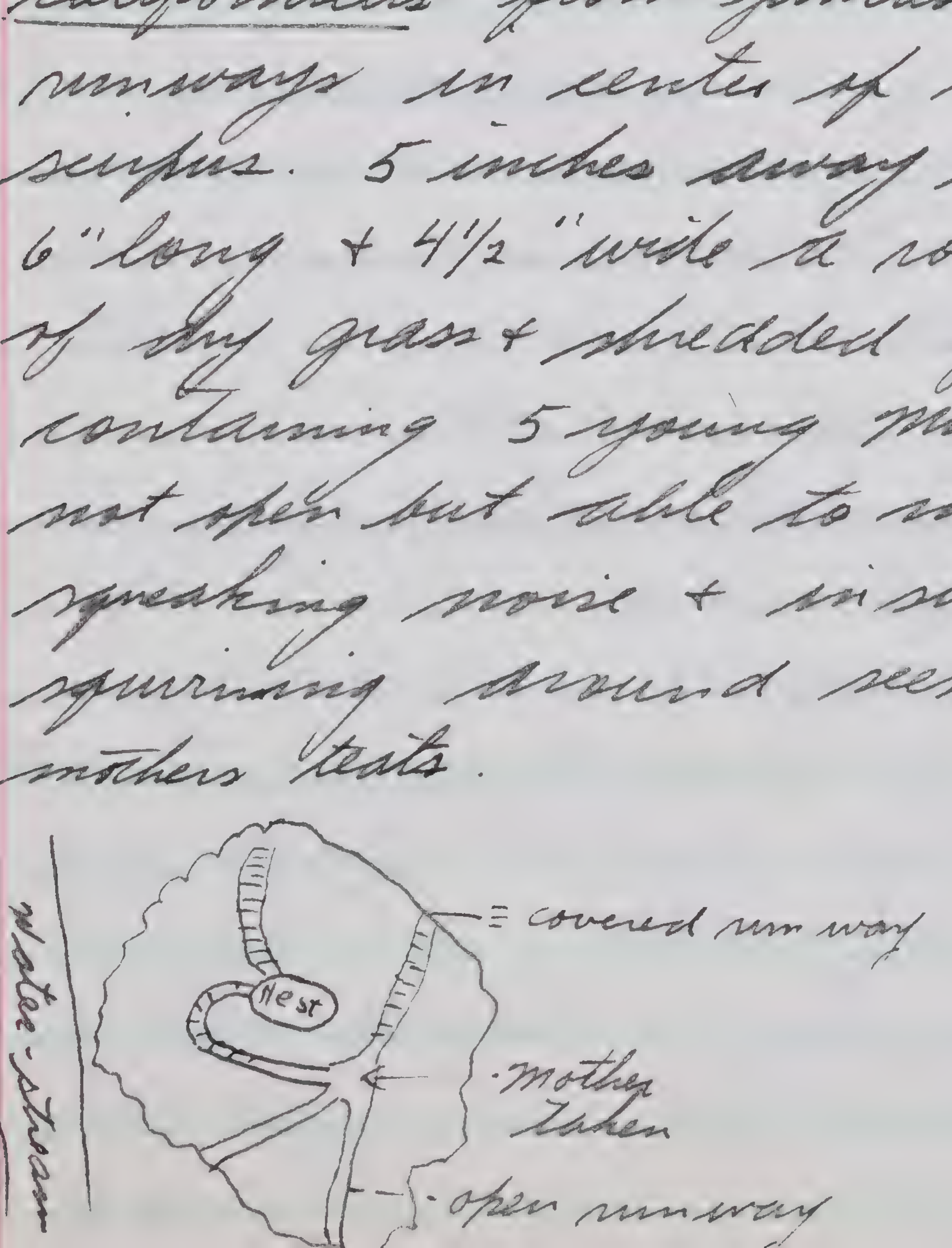
③ ad ♀ Thomomys bottae taken 20 yards from the second ♂. This ♀ was nursing apparently judging from the appearance of the teats. Three gophers were taken from this pocket all relatively close together and at an altitude of 2900 ft.; ④ ad ♂ Thomomys bottae taken from south side prairie on hill side at 3000 ft. 4 sets then yielded 4 gophers.

June 12-

4 gopher sets (8 traps) put out yesterday but this morning ① ad. ♂, Thomomys bottae from set on NW. slope (approximately 2900 ft.) of open prairie; ② ad. ♂ Thomomys bottae from same pocket I mentioned yesterday. [In this pocket area where the soil is rich and black and soft & damp 3 ♂'s and 1 ♀ have been taken in an area of 75 sq. yards.]

20 mouse traps set last night in patches of scirpus in swampy areas at seepage places but this morning (1) ad. Sorex vagrans from open place within clump of swamp grass. [I heard trap go off, rushed to the spot & found it caught by the tail. This was at 6:46 A.M. broad day light and

sun shining altho the place where taken was mossy, damp and shaded.]
② ad ♀ Peromyscus maniculatus ~~gambeli~~ rubidus taken in Microtus runway among grass.
③ im. ♀, P. m. rubidus from open space between clumps of marsh grass but shaded + damp.
④ ad ♂, P. m. rubidus from Microtus runway in dark damp midst of clump of scirpus.
⑤ ad ♀ Microtus californicus from run way in open; ⑥ ad. ♂ Microtus californicus from covered run way, ⑦ ad ♀ Microtus californicus from exposed or fairly open runway along ground; ⑧ ad. ♀ Microtus californicus from junction of three runways in center of clump of scirpus. 5 inches away was a nest 6" long + 4½" wide a rounded pile of dry grass + shredded grass blades containing 5 young microtus. Eyes not open but able to make a squeaking noise + instinctively squirming around seeking their mothers teats.



yesterday with Dr Grinnell I shot a bird thought to be a Savannah Sparrow but the bird could not be found. Returning to the spot today I found the remains of the bird which were identified by Dr Grinnell as a ♀ Lazuli bunting. This casts further doubt upon the existence of Savannah Sparrows in these prairies. One has not definately been seen yet.

153 im Grouse 16.8 g. Too old to tell sex - Picked up by Gilmore June 11 in trail (see his note book)

154 ♀ ad. Microtus californicus 45.3 g Taken from runway junction in clump of scirpus in seepage area in draw in midst of prairie at 2900 ft. This is the mother of the litter of 5 young No. 155 (see below) measurements 153-40-20-12

155 Five young Microtus californicus taken with ad ♀ no 154 (see notes on page 75) aggregate weight of the 5 was 24.3 grams.

156 ♀ White-crowned Sparrow 24.8 g Ova ⅜ Probably eggs already laid since breast showed signs of incubation. Taken June 11, in grass in open prairie 200 yds. from oaks but along side tall scirpus clump grass.

June 12.

157 ♂ White-crowned Sparrow 27.1 g. Testes large ◯ Taken by Gilmore from chinquapin at 3000 ft. 4 mi. N.E. Coyote Peak.

Walked to top of Schoolhouse Peak this afternoon with Dr. Grinnell keeping special watch for Horned Larks and Savannah Sparrows. Surely if they are in this area they should have been found along this open gentle slope bare in places with some seepage areas and an occasional isolated gamy oak. The peak itself is not a peak but just a rise in the ridge. The same may be said for Coyote Peak and many other so-called "peaks". A bench mark recently placed on the summit did not give the elevation but a map gives it as 3055. There are a good many sheep grazing around but the range is not over stocked. There is ample grass and indeed this is the best range I have seen yet in our travels

June 13.

This is exclusively a sheep country and the usual antipathy exists among the ranchers toward cattle men. From the top of Schoolhouse Peak one could see Hupa Mt. + Horse Mt. and other prominences on the "Yolla Bolly to the sea" range. The ocean could be observed on a clear day to the west. The snow capped Siskiyous and Trinity ranges loomed up to the north + north-east. The drainage of the land into Redwood creek on the one side and into Pine creek on the other was pronounced. Hupa Mt. appeared to present much the same aspects as our present location, more heavily timbered perhaps but also having bare places with garry oaks along the edges. At the base of the hill at the edge of the timber we heard Western Tanagers, Black-headed grosbeaks, Lazuli Buntings, Canadian Nut-hatches within the forest and one Cassin Vireo was taken. Gophers and

mole workings were observed up to the summit and remains of two skunks were found perhaps laid out as poison bait for a killer coyote that has been preying upon lambs from the Lyon ranch. They have sent for a "government" trapper with his dogs since their own efforts to trap or poison it have been unsuccessful. On the summit a Western Yellow-bellied Racer was taken and lower down in a ravine a Sceloporus graciosus lizard seen.

We then journeyed down to Tomlinsons about 4 mi SW of Coyote Peak. Caught a gopher snake in road + shot a California Jay. For details of interview with Mrs Tomlinson see Dr Grinnells notebook. The hired man said there was 3 ft of snow on the level last winter and drifts blocked the road for 6 weeks. He mentioned a herd of Elk near the Redwood Highway that

June 12.

sometimes came up this way. At Tomlinsons we observed the first redwoods.

One ♂ ad. *Thomomys bottae* was taken this afternoon in same general location as the previous mentioned pocket gopher. One ♀ ad *Microtus californicus* taken shortly after trap was set.

June 13.

50 traps (40 mouse and 10 rat) set down to ravine all in dense timber but this morning 1 im ♂ *P. m. rubidus* from base of dead stump.

20 mouse traps set in scirpus clumps in marsh seepage in prairie but: ① ad ♂ *P. m. rubidus* from open place between clumps of grass ② ad ♂ *Microtus californicus* from run way; ③ ad ♀ *Microtus californicus* from runway

The *P. m. rubidus* taken this morning was in the same clumps or patch of scirpus that the *Sorex vagrans* was taken in yesterday but no *Microtus* came from this patch nor

June 13.

was there any sign. On the other hand in the large patch that has been yielding all the microtus has also yielded Peromyscus but no Sorex. The habitat of occurrence of all 3 of these is the same however.

158 Western yellow-bellied racer - Taken in deep grass on top of Schoolhouse Peak, June 12, at 3055 ft.

159 Gopher snake - In middle of road 4 mi. S.W. Coyote Peak 3000 ft. June 12.

✓160 ♂ Microtus californicus 143-39-20-10- 27.0 g.

✓161 ♀ Microtus californicus 147-39-19-11- 33.4 g
5 embryos 8 mm. in diameter

✓162 ♀ Microtus californicus 140-36-20-10- 29.4 g.
5 embryos X 10 mm.

✓163 ♂ Cassin Vireo 14.2 g. Testes small ○
Taken from Black Oak June 12, 3000 ft.

✓164 ♀ Phenacomys longicaudus 187-62-20-13 (notch)
28.8 g. Picked up in middle of road having been run over and mashed by some car consequently no skull could be saved. Total length measurement may be unreliable but the others are good.
no embryos.

June 13-

This afternoon 4 gopher sets (8 traps) brot ① one ♂ Thomomys bottae and ② one ♀ Thomomys bottae. The burrows of these two ran within 50 yards of each other on the top of the ridge in rich soft rock-free soil. The burrows were large enough to admit the entire hand.

Another microtus nest was found in the midst of a dead dry clump of scirpus. The mother was evidently taken yesterday. The 3 young, eyes not yet open, were not saved.

June 14-

50 traps (40 mouse + 10 rat) set in timber down to bottom of ravine brot this morning ① ♂ im. P.m. rubidus in dry place under log at bottom of ravine; ② Sorex trowbridgii from beside small log - among damp litter of leaves + pine needles.

13 mouse traps set in scirpus brot one ad ♀ Microtus californicus

5 gopher sets (10 traps) brot ① ♂ ad Thomomys bottae; ② ♀ ad Thomomys bottae ③ ♂ ad Thomomys

June 14.

bottae.

Chipping Sparrows were gathered in groups of 3 + 4 around the sheep corral and here too were noted Western Lark Sparrows. The latter were also found at the edge of timber in Garry Oaks. Meadowlarks are numerous over the grasslands. Two Brewer Blackbirds flew by. One Red-shafted Flicker was noted in an isolated clump of Garry Oaks.

Two deer were grazing along side the road but loped off into the forest. Tanagers are continually heard in the timber but seldom seen.

165 ♀ Western Tanager 32.2 g. Ova large varying by

166 ♂ Western Tanager 29.0 g Testes large Taken with No. 165 from Garry Oak.

167 ♂ California Jay 94.5 g. Taken by Gilmore from Garry Oak.

June 15-

50 traps (40 mouse and 10 rat) set

Behle, W. H.
1933
June - Dec.

Berkeley and MVZ

Behle, W. H.
1933

Berkeley, and MVZ.
June 15 – Dec. 7, 1933

Spec. Nos. 168 – 358

June 15-

in timber down gulch brot: ① ♂ im. Peromyscus sp. rubidus from base of stump ② ♂ ad. Pm. rubidus alongside log beside small opening underneath; ③ ad ♀ from cavity beneath overhanging root.

University of California Museum of Vertebrate Zoology - Berkeley -

June 20, 1933 -

168 Salamander. Taken by Joseph Dixon at General Grant National Park 7000 ft. Fresno Co. Calif. June 20,

169 sex? im. Horned Lark. no wt. From Elk Grove, Sacramento co, (near Sacramento) Calif. E. S. Sumner Sr. Sent in on April 6.

June 21 -

170 ♂ Psittacula spengeli

171 sex? Eupsittula pertinax aeruginosus

Brought in by Dr K F Meyer of the Hooper Foundation, San Francisco, Calif. Part of a shipment of parrots from S. Am probably Colombia seized because of parrot fever. Preserved in formalin. Brot in on June 16, 1933 -

Behle
1933 - Berkeley, Alameda Co. Calif. Museum Vertebrate Zoology 85

June 23 -

172 sex? *Scardafella inca* Brot in by E. W. Gifford. Died in his aviary June 23.

August 14 -
Acc. 4183

173 sex ? *Phalaropus fulicarius*
A seizure by Inspector George Tonkin. Taken August 10, 1933 on Bodega Bay, Sonoma Co. Calif.

Acc. 4185 -

174 sex? ♂ *Anna Humming bird*.
Rec'd from Prof. Emil Fritz. Aug. 14, 1933 - Berkeley, Alameda Co. Calif. Picked up dead. Presumably killed by fighting. Bill contained feathers.

August 21 -
Acc 4187

176 ♂ *Oena capensis* Immature ♂ 176
175 sex ? *Chamaepelia minuta* (columbigallina) ? 175
Brought in by E. W. Gifford from his aviary. Oakland, California. Died on Aug. 20.

Berkeley, Alameda Co. Calif. M.V.Z. H.C.

August 29 -

Acc. 4191

177 sex? OEna capensis

From aviary of E. W. Gifford Oakland California. The bird died August 24th. Immature

With the accession was one egg laid by a OEna capensis. The egg was laid Aug 21st.

Acc 4193

178 ♀? American Egret.

Taken by Inspector Geo. Tonkin 3 miles North of Maxwell, Colusa County California. August 28, 1933. The bird was found crippled. Efforts to save it were futile so it was killed by Tonkin.

These birds are said to be far from common in California. Tonkin reports that a colony of about 200 are now nesting in some cottonwoods on the J. R. Terry Ranch in this neighborhood.

These birds are regarded locally as detrimental birds. However, the stomach was empty so no check could be had as to food eaten. The body was very emaciated probably

because the bird was crippled and unable to attain food. Weight not taken.

Sept. 5-
Acc. 4195

179 sex? Northern Phalarope Skeleton only
180 " " " " "
181 " " " " "

These three birds found dead on Sept. 3rd by W. I. Follett 1/4 mi. E. of east end San Mateo Bridge, Alameda Co. Calif. Saved as skeleton only. No sex could be determined nor could weights be taken since the birds had been gutted before being brought in.

Sept. 7-
Acc.

182 sex? Black-footed Albatross
Diomedea nigripes - Skull only
Found by Vincent Mowbray 5052 Fairfax Ave. Oakland. on the outer beach, San Francisco, about three miles below Fleishacker Zoo. August 27, 1933- The bird

presumably shot the day before.

Sept. 12
Acc. 4196

183 Fem. Columbigallina minuta 19.7g.
Thru. Courtesy of E. W. Gifford
Oakland, Calif. Died Sept. 11th.

October 6,

184 ♂ Accipiter cooperii Wt. —
Brot in by E. J. Dyer Oct. 6th
40 Selborne Drive, Piedmont, Alameda
Co. Calif. Was attacking the birds
on his place and disturbing
his Thrashers. contained remains of bird probably sparrow from remains.

October 12.
Acc. 4215

185 sex? California Thrasher. 87.3 g. (wt taken after bird dead 10 days)
3 miles north Stonyford, Glenn Co. Calif.
Picked up dead along side road by Robert
Orr Oct. 6, 1933.

Acc. 4221

Four Ruddy Ducks from near San
Pablo, Contra Costa Co. Calif. on
October 8, 1933. Seizure by
inspector George Tonkin. Two
saved as study skins and two
as skeletons.

Oct. 12.

186 ♀ Ruddy Duck. Wt. 405.3g Study skin.
187 sex? Ruddy Duck. " 422g " "
188 ♀ Ruddy Duck. " 401g Skeleton only
189 sex? Ruddy Duck. " 468g Skeleton only

Weights taken four days after being in storage. Birds quite fat necessitating their being degreased in gasoline. The seizure tag is with one of the specimens saved as skeleton.

Oct. 17th
acc. 4230

190 ♀ Varied Thrush

Picked up dead in Piedmont Alameda county, Calif. Oct. 16, 1933 by Miss A. M. Alexander and Miss L. Kellogg. Study skin

I could see no explanation for the death of the bird except that it might have flown against a window. Fluid on the side of the head gave some indication of this possibility.

I was surprised to find the bird quite fat but the layers of fat instead of being soft and greasy were hardened like suet of beef and were closely attached

Oct. 17

to the skin so close and firm that several holes were torn trying to get rid of the fat. Consequently degreasing was incomplete and I expect the worst results in a few years from grease burning.

Nov. 30

Acc 4251

191 ♂ Horned Owl - B. v. saturatus

Received from Duncan Dunning taken at Irmulco, Mendocino Co. Calif. Nov. 26, 1933. Caught in small steel trap set out on top of post — was raiding chickens. Testes o

Acc 4253

192 ? Tanager. (Scarlet) Skeleton

193 ? Cardinal Skeleton

Received from Miss Barbara Norris 219 N. Ellsworth San Mateo, San Mateo Co. Received at MVZ Nov. 28. Birds from the aviary of Mr Baer, Hillsborough, San Mateo county, Calif. Died on Nov. 15, 1933.

Berkeley, Alameda Co. California

Dec. 2 -

Accession No. 4255

The following birds received from the Alaska Agricultural College and School of mines. Collection made by O.W. Geist chiefly on St. Lawrence Island, Alaska. Of the 200 birds received 161 have been kept and 39 discarded.

194 ? Gavia immer immer Oct. 10, 1933 ?
Mc Grath, Alaska - H.H. Twitchell.

195 ♀? Gavia adamsii (im) Oct. 20, 1929
St. Lawrence Island, Alaska, O.W. Geist.

196 ♀ ? Gavia arctica pacifica July 25, 1928
Ku Kuliak, St. Lawrence Island. Geist.

197 ♂? Gavia arctica pacifica Oct. 28, 1928
Ku Kuliak, St. Lawrence Island, Geist

198 ? Gavia arctica pacifica Sept. 6, 1929
Sevoonga, St. Lawrence Island ~~H.H.~~ Geist

199 ♂ Gavia arctica pacifica Sept. 4, 1930.
St Lawrence Island. by Jimmie

200 ♀ Gavia arctica pacifica Sept. 6, 1930
St. Lawrence Island, Alaska by Jimmie

201 ?. Gavia stellata July 26, 1928
Ku Kuliak, St. Lawrence Is. Geist.

202 ♀ Gavia stellata July 26, 1928 -
Ku Kuliak, St. Lawrence Is. Geist.

203 ♂ Gavia stellata July 24, 1928 -
Ku Kuliak, St. Lawrence Isl. Geist

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204 ♀ Gavia stellata Aug. 27, 1930
St. Lawrence Is. AAA. by Jimmie
205 ♀ Colymbus auritus Sept. 21, 1930
Lake Harding Geist
206 ♂ Fulmarus glacialis rodgersii May 9, 1929.
St. Lawrence Is. Geist.
207 ♂ Fulmarus glacialis rodgersii May 9, 1929
St Lawrence Is. Geist
208 ♂ Phalacrocorax pelagicus pelagicus June 4, 1929
S.W. cape, St. Lawrence Is.. AAA Geist
209 ♂ Phalacrocorax p. pelagicus June 4, 1929
S.W. cape. St. Lawrence Is. Geist
210 ♂ Phalacrocorax p. pelagicus Oct. 24, 1928
Gambell, St. Lawrence, Geist
211 ♂ P. p. pelagicus Aug. 21, 1929
St Lawrence Is. AAA. by Jimmie
212 ♂ P. p. pelagicus Oct. 24, 1928
Gambell, St. Lawrence Is. Geist
213 Branta nigricans Aug. ?, 1929
Sevoonga, St. Lawrence Is. Geist
Destroyed in degreasing
214 ♀ Philacte canagica Sept. 11, 1928
Gambell. St Lawrence Is. Geist
Destroyed in degreasing
215 ♂ Philacte canagica Sept. 15 ?, 1928
Gambell, St Lawrence Is. O.W. Geist
216 ♂ Philacte canagica Oct. 7, 1928
Gambell. St. Lawrence Is. O.W. Geist
217 ♀ Dafila acuta tzitzihoa Sept. 6, 1930
St. Lawrence Is. by Jimmie

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218 ♀ *Charitonetta albeola* — Sept. 21, 1930
Lake Harding, Alaska — [illegible] — Geist

— Destroyed - came apart in degreasing
219 ♀ *Charitonetta albeola* — Sept. 21, 1930
Lake Harding, Alaska — Geist.

— Destroyed - came apart in degreasing
220 sex? *Charitonetta albeola* — Sept 21, 1930
Lake Harding, Alaska — Geist

221 ♂ *Clangula hyemalis* — May 14, 1930.
St Lawrence Is — by Jimmie

222 ♂ *Clangula hyemalis* — May 14, 1930
St. Lawrence Is. — by Jimmie

223 ♂ *Clangula hyemalis* — May 8, 1929
St. Lawrence Is. — Geist

224 ♀ *Clangula hyemalis* — May 8, 1929
St. Lawrence Island — Geist

225 ♀ *Clangula hyemalis* — July 23, 1928
Ugkuliak? St. Lawrence Is. — Geist

Destroyed in degreasing
226 ♂ *Histrionicus histrionicus pacificus* — Dec. 26, 1928 ~~Nov. 18, 1929~~
St. Lawrence Is. Alaska — Geist

227 ♂ *Histrionicus histrionicus pacificus* — June 25, '29
St. Lawrence Is.

228 ♀ *Polysticta stelleri* — Sept. 27, —
Gambell, St Lawrence Island

229 ♂ *Polysticta stelleri* — Aug. 3? 1928
Sevoonga? Beach St. Lawrence Is. — Geist

230 ♂ *Polysticta stelleri* — July 1, 1929
Gambell, St. Lawrence Is. — Geist.

231 ♀ *Polysticta stelleri* — Oct. 27, 1928
Gambell, St Lawrence Is. — Geist

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232 ♀ Somateria v-nigra May 12 - 1929
St. Lawrence Is. Geist
233 ♀ Somateria v-nigra Sept? 1928
KuKuliak, St. Lawrence Geist
234 ♀ Somateria v-nigra July 21 - 1928
KuKuliak St. Lawrence Is. Geist
235 ♀ Somateria v. nigra July 30, 1928?
KuKuliak St. Lawrence Is. Geist
236 ♀ Somateria v-nigra April 17, 1929
St Lawrence Island Geist
237 ♀ Somateria v-nigra Dec. 31, 1928
St. Lawrence Island Geist
238 ♀ Somateria v. nigra June 25, 1929
St. Lawrence Island. Geist
239 ♀ Somateria v. nigra
No data - Label unreadable.
240 ♀ Somateria v. nigra July 22, 1928
KuKuliak, St. Lawrence Is. Geist
241 ♀ Somateria v-nigra July 27, 1928
KuKuliak, St. Lawrence Is. Geist
242 ♀ Somateria v-nigra April 17, 29
St. Lawrence Is. Geist
243 ♀ Somateria v-nigra July 24, 1928
KuKuliak, St. Lawrence Isl. Geist
244 ♀ Somateria v-nigra July 25, 19?
KuKuliak, St Lawrence Is. Geist
245 ♀ Somateria v-nigra July? 27 - 1928
KuKuliak, St. Lawrence Is. Geist

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246 ♀ Somateria v - nigra May?2 ?1928
Ku Kuliak, St. Lawrence Is. Geist
247 ♂ Somateria v. nigra April 17, 1929
St. Lawrence Is. Geist
248 ♂ Somateria v - nigra May 23, 1929
St. Lawrence Is. Alaska Geist
249 ♂ Somateria v - nigra June 4, 1929
S.W. cape St. Lawrence Is. Geist
250 ♂ Somateria v - nigra July 16, 1930
St. Lawrence Is. by Jimmie
251 ♂ Somateria v - nigra April 19, 1929.
St. Lawrence Is. Geist
252 ♂ Somateria v - nigra, Sept. 25, 1930
St. Lawrence Is. by Jimmie
253 ♂ Somateria v - nigra July 16, 1930
St. Lawrence Is. by Jimmie
254 ♂ Somateria v - nigra June -, 1930
St. Lawrence Is. by Jimmie
255 ♂ Somateria v. nigra Nov. 20, 1928
St. Lawrence Is. Geist
256 ♂ Somateria v - nigra May 27, 1929
St. Lawrence Is. Geist
257 ♂ Somateria v - nigra May 27-1929
St Lawrence Is. Geist
258 ♂ Somateria v - nigra April 14, 1929
St Lawrence Island Geist
259 ♂ Somateria v - nigra May 23, 1929
St. Lawrence Is. Geist

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260 ♂ Somateria v-nigra Nov. 3, 1928.
Gambell St. Lawrence Is. Geist
Destroyed in degreasing
261 ♀ Somateria spectabilis. Oct. 16, 1928
Gambell, St. Lawrence Is. - Geist
262 ♀ Somateria spectabilis Oct. 25, 1928.
Gambell St. Lawrence Is. Geist
Destroyed in degreasing
263 ♀ Somateria ~~v-nigra~~ spectabilis Oct. 22, 1928
Gambell, St. Lawrence Is. Geist
264 ♂ Somateria spectabilis June 7, 1929.
St. Lawrence Island Geist
Destroyed in degreasing
265 ♀ Somateria ~~v-nigra~~ spectabilis Dec. 12 - 1928.
St. Lawrence Island Geist
266 ♂ Somateria spectabilis June 7, 1929
St Lawrence Island Geist
267 ♂ Somateria spectabilis June 11, 1929
St. Lawrence Is. Geist
268 ♂ Somateria spectabilis June 7, 1929
S. Lawrence Is. Geist.
269 ♀ Somateria spectabilis Oct 17, 1928.
Gambell S. Lawrence Is. Geist
270 ♀ Somateria spectabilis April 17, 1929
St. Lawrence Is. Geist
271 ♂ Somateria spectabilis July 9, 1929
St. Lawrence Is. Geist
272 ♀ Somateria spectabilis Nov. 15 ? 1927.
St. Lawrence Is. Geist
273 ♀ Somateria spectabilis Aug 31, 1929
St. Lawrence Is. Geist

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274 ♂ Somateria spectabilis June 11, 1929.
St. Lawrence Is. Geist

275 ♀ Somateria spectabilis July 1, 1929.
St. Lawrence Is. Geist

276 ♂ Somateria spectabilis June 1-, 1929
St. Lawrence Island Geist

277 ♂ Somateria spectabilis July 10, 1929
St. Lawrence Island Geist

278 ♂ Somateria spectabilis June 6, 1930
St. Lawrence Is. Geist

279 ♂ Somateria spectabilis June 11, 1929
St. Lawrence Is. Geist

Destroyed in degreasing
280 ♀ Somateria spectabilis Oct. 14, 1928
Gambell, St. Lawrence Is. Geist

281 ♀ Somateria spectabilis July 1, 1929
St. Lawrence Is Geist

282 ♂ Somateria spectabilis Oct. 21, 1928?
Gambell. St. Lawrence Is. Geist

283 ♂ Somateria spectabilis June 7, 1929
St. Lawrence Is. Geist

284 ♀ Somateria spectabilis July 10, 1929.
St. Lawrence Island Geist

285 ♀ Somateria spectabilis Nov. 9, 1928
St Lawrence Island Geist

286 ♂ Somateria spectabilis June 11, 1929
Gambell, St. Lawrence Is. Geist

287 ♂ Somateria spectabilis July 10, 1929.
St. Lawrence Is. Geist

Dec. 2.

288 ♂ Somateria spectabilis July 1, 1929
Gambell, St. Lawrence Is. Geist
289 ♂ Somateria spectabilis July 9, 1929
St. Lawrence Is. Geist
290 ♂ Somateria spectabilis May 23, 1929
St. Lawrence Is. Geist
291 ♀ Melanitta perspicillata Sept. 21, 1930
Lake Harding, Alaska Geist
292 ♀ Mergus serrator Sept. 28, 1930
Lake Harding, Alaska Geist
293 ? Buteo borealis harlani Sept. 28, 1930
Mile 20, Richardson Trail, Alaska. Geist
294 ? Buteo swainsoni Date unknown
Flat, Alaska A.H. Twitchell
295 ? Falco columbarius bendirei
No data - No tag.
296 ? Lagopus rupestris kelloggae
No data - No tag
297 ♀ Pluvialis dominica fulva Sept. 26, 1929
St. Lawrence Is. Geist
298 ♂ Pisobia melanotos Sept. 25, 1929
St. Lawrence Is. Geist
299 ♂ Pisobia bairdii June 12, 1924
Crater Mt. Ophir, Alaska A.H. Twitchell
300 ♂ Limosa lapponica baueri Aug. 16, 1929.
St. Lawrence Is. by Jimmie
301 ♂ Stercorarius pomarinus Oct. 15, 1928
Gambell, St. Lawrence Is. Geist

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302 ? Stercorarius pomarinus Oct. 7, 1928
Gambell, St. Lawrence Is. Geist
303 ♂ Stercorarius pomarinus Oct. 28, 1928
Gambell, St. Lawrence Is. Geist
304 ? Stercorarius pomarinus Oct. 1928
No tag. St. Lawrence Is. Geist
305 ♀? Stercorarius pomarinus Sept. 16, 1928
St. Lawrence Is. Geist
306 ♂ Stercorarius longicaudus July 26, 1929
Gambell, St. Lawrence Is. Geist
307 ♀ Larus hyperboreus Oct. 14, 1928
Gambell, St. Lawrence Is. Geist
308 ♂ Larus hyperboreus Aug 21, 1929 ?
St. Lawrence Is. by Jimmie
309 ♂ Larus hyperboreus Aug 21, 1929
St. Lawrence Is. Jimmie
Destroyed in degreasing.
310 ♂ Larus hyperboreus Sept. 13, 1928
Gambell, St. Lawrence Is. Geist
311 ♂ Larus hyperboreus Oct 1, 1928 ?
Gambell, St. Lawrence Is. Geist
312 ♂ Larus argentatus vegae Oct. 16, 1928.
Gambell, St. Lawrence Is. Geist
313 ♂ Larus argentatus vegae Aug. 26, 1930
St. Lawrence Is. Jimmie
314 ♂ Larus argentatus smithsonianus Sept. 13, 1928.
Gambell, St. Lawrence Is. Geist
315 ♂ Pagophila alba May 6, 1928
St. Lawrence Is. Jimmie

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316 ♂ Pagophila alba May 6, 1930 -
St. Lawrence Is. Jimmie
317 ♀ Rissa tridactyla pollicaris Sept. 13, 1928
Gambell, St. Lawrence Is. Geist
318 ♀ Rissa tridactyla pollicaris Sept. 13, 1928
Gambell, St. Lawrence Is. Geist
319 ♀ Rissa tridactyla pollicaris Aug. 27, 1930
St. Lawrence Is. Jimmie
320 ♀ Rissa tridactyla pollicaris Sept. 9, 1928?
Gambell, St. Lawrence Is. Geist
321 ♀ Rissa tridactyla pollicaris Sept. 11, 1928.
Gambell, St. Lawrence Is. Geist
322 ♂ Rissa tridactyla pollicaris Sept. 19, 1928.
Gambell, St. Lawrence Is. Geist
323 ? Rissa tridactyla pollicaris Sept 18, 1928
Gambell, St. Lawrence Is. Geist
324 ? Rissa tridactyla pollicaris Sept 16, 1928
Gambell, St. Lawrence Is. Geist
325 ♂ Rissa tridactyla pollicaris Sept. 13, 1928 -
Gambell, St Lawrence Is. Geist
Destroyed in degreasing.
326 ♂ Rissa tridactyla pollicaris Sept. 20, 1928.
Gambell, St Lawrence Is. Geist
327 ♀ Sterna paradisaea Aug. 18, 1930.
St Lawrence Is. Jimmie
328 ♂ Cepphus columba May 19, 1929
St. Lawrence Is. Geist
329 ♂ Cepphus columba May 19, 1929
St. Lawrence Is. Geist

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330 ? Cepphus columba Summer 1928
Sevoonga, St Lawrence Is. Geist.
331 ♂ Cepphus columba May 19, 1929
St Lawrence Is. Geist
332 ? im Cepphus columba ? 1928
No tag. St. Lawrence Is. Geist
333 ♂ Uria lomvia arra Aug. 8, 1930
St. Lawrence Is. Jimmie
334 ♂ Uria lomvia arra May 23, 1929
St Lawrence Is. Geist
335 ♀ Uria lomvia arra May 23, 1929
St. Lawrence Is. Geist
336 ♂ Uria lomvia arra Aug. 8, 1930
St. Lawrence Is. Jimmie
337 ? Cyclorrhynchus psittacula Summer 1928.
Sevoonga St. Lawrence Is. Geist
338 ♂ Fratercula corniculata June 15, 1929
St. Lawrence Is. Geist
339 ♂ Fratercula corniculata Sept. 15, 1928.
Gambell, St. Lawrence Is. Geist
340 ♂? Fratercula corniculata July 18, 28.
Sevoonga, St Lawrence Is. Geist
341 ♂ Fratercula corniculata July 18, 1928.
Sevoonga, St. Lawrence Is. Geist
342 ♂ Fratercula corniculata Aug. 26, 1930
St. Lawrence Is. Jimmie
343 ♂ Lunda cirrhata Sept. 9, 1930
St. Lawrence Is. Jimmie

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344 ♂ Fratercula cirrhata — Sept 4, 1929
St Lawrence Is. — Jimmie
345 ♂ Fratercula cirrhata — July 18, 1928
Sevoonga St. Lawrence Is. — Geist
346 ♂ Fratercula cirrhata — Sept 21, 1929
St. Lawrence Is. — Jimmie
347 ♂ Fratercula cirrhata — July 18, 1928 -
Sevoonga, St. Lawrence Is. — Geist
348 ? Bubo virginianus lagophonus
No tag
349 ♀ Nyctea nyctea — Nov. 19, 1928
St. Lawrence Is. — Geist
350 ♀ Scotiaptex n. nebulosa — Mar 18, 1925?
Iditarod. Alaska.
351 ? Corvus corax principalis — Oct. 25, 1928
Gambell, St Lawrence Is. — Geist
352 ♂ Oenanthe oenanthe oenanthe — Aug 22, 1930
St Lawrence Is. — Jimmie
Destroyed in degreasing
353 ♂? Pinicola enucleator alascensis — Apr. 9, 1924.
Flat, Alaska — A.H. Twitchell
Destroyed in degreasing
354 ♂ Pinicola enucleator alascensis — April 9, 1924
Flat, Alaska — A.H. Twitchell.
355 ♂ Sciurus hudsonicus — Sept. 28, 1930
Richardson Hiway mile 22. — Geist

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Dec. 7
Acc 4236 (in part)

♀ 356 Horned Lark wt. 27.8g.
♂ 357 Horned Lark wt. 30.3g
♀ 358 Horned Lark wt. 26.0g

These three birds taken by Gilmore upon his return from Kern county. Shot at Monolith Dec 5. Part of accession No. 4236.

No 358 ♀ was badly shot and it was necessary to wash the blood off. When immersed in gasoline many feathers came out especially on the upper breast and neck. Also I thought there was a slight color change to the dark possibly from dust being washed out.

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Salt Lake City, Utah

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Interviewed Emil Johnson of the Johnson Auto Metal Works on south State street. He made but two trips to Bird Island this past year one about the first of June and then again two weeks later. The lake being so low is discouraging to boating activities. Johnson took Wushback in charge of Bear River Migratory game refuge. on one of these trips and Joe Vincent, local sportsman of note. Johnson was impressed with the small number of young pelicans reared this past year. There were a few freshly laid eggs and a few nearly grown young. He could not give an estimate but is qualified in stating that the numbers were considerable less than last year and previous years since Johnson has visited the island year after year. While he could not say for sure, he thought there were only twelve heron nests. The gull population was about the same as ever. He did not call at White Rock nor Egg Island nor did he get to Gunnison Island this

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past year. Johnson was immersed at this Ogden party that was marooned on the island. He noticed a definite gap from fresh eggs to nearly full grown young rather than the usual successive stages of growth and development. It would seem that all eggs were destroyed by the gulls and the very young pelicans perhaps died from exposure since the adults were kept from the island more than twenty four hours. Some new eggs were presumably laid after the old ones were destroyed apparently. June is very late for eggs to be found, I believe.

Johnson still has his place on the Bear River for boating activities and made money this past year renting out small boats and motors to hunters. The duck hunting was reported to be very good this past year.

Another significant thing learned from Emil is the progress of his amphibian boat. It was

remarkable in its performance being capable of 30 miles an hour in shallow mud and water, also fast on land when the wheels are used. It navigates well in deep water but here he is not satisfied with its performance. The propelling force comes from a rand airplane motor and propellor mounted near the rear of the boat.

The purpose of this craft was to be able to scare ducks from poisonous areas, to get quickly around the marshes and to run down and pick up sick ducks, transport them to fresh water. Several hundred a day could be thus saved. A successful performance was given for all these.

He made the statement however that there were very few sick ducks this past year on the marshes.

He also said that Archie Hull, one of the wardens on the Bear

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river game preserve was a keen observer and was gathering much data.

Saw Frank Dole, the local sportsman who was the leader of the opposition last year against Mushbach as director of the Bear River Bay Refuge. Newell Cook, state fish and game commissioner sided in with the sportsmen. altho Mushbach was exonerated by the Biological Survey, Dole said he had reversed his policies, now showed cooperation and that there had been a reallotment of the shooting and protected areas.

Had a long talk with Dr J. W. Sugden. He tells me the local Cooper Club chapter has been inactive ever since Mrs Sugden's death (his mother) a year ago. Only one meeting was held last year. Little progress then has been made from in getting the information from the members. With been

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exceptions they are rather indifferent keep sloppy notes if any and show little cooperation. Sugden and Woodbury are the most active bird men in Salt Lake. Cal Bee is active in Provo. Sugden said that in correspondence with Cottam in Washington, he first acted as though he had priority rights on Utah bird problems, but after a strong letter from Woodbury he became more cooperative. I have heard that he is fine from an organization and managerial standpoint but not so accurate and reliable in his scientific work.

Dr Sugden of recent years has been turning to motion and still pictures of birds and has some really fine pictures of marsh and shore birds. This last year in June he went on the AAAS expedition or excursion to Bird Island in June and took pictures

of the residents of Egg and Hat Islands. Also he banded about 25 or 30 pelicans, heron and cormorants. Elmer Berry also banded a few more on the same trip. About a dozen people went on the trip, got caught in a storm and everything was burried. Sugden says the same thing as Johnson regarding the small number of pelicans. I saw his pictures of both places and was particularly pleased to see so many young cormorants on Egg Island, all practically full grown. In the one I counted roughly some 65 young. The nests looked much the same as before.

This past year Sugden located a colony of twelve breeding birds in the Bear River marshes of the Treganza Heron. The colony of Franklin Gulls on the Bear River numbered this past

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year about 2000. They nest right down in the marshes. I was interested in finding out that he had pictures of Mallards it nests some 10 ft. high in bushes and trees and not on the marshy ground like other ducks.

Sugden also told me of his observations on a California Gull feeding in the periphery of the foilage of a cherry tree. Being unable to perch and the branches being weak the bird flopped down in the top of the tree with out-spread wings thus supporting its weight.

At another time he observed the same behavior by a Flicker eating berries from a bush. This is curious behavior.

Woodbury is still active collecting although his increased teaching duties leave him with little free time. He has but one student working in birds, a fellow from the Utah agricultural college who now holds a fellowship at the U of Utah.

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Jean Linsford. He is working on Agelaius, natural history and possibly some systematics.

Dr Woodbury tells me there are rumors going around to the effect that the sportsmen of the state are about to start a war against the White Pelican and raid the colonies in the lake next year. Woodbury intends writing to the Biological Survey and advocating that the rookeries be made part of the Bear River Migratory Bird Refuge. Some concerted action should be taken to secure protection for these birds. It seems to me that the sportsmen are so strong in Utah that a bill could never be introduced for state protection. It is a matter for the federal government.

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Jan. 4.

Few birds were seen from the train on the way from Salt Lake. Two Corvus corax sinuatus were seen flying near the west shore of Promontory Point and an occasional one was sighted

[illegible]

[illegible]

[illegible]

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San Francisco Bay region

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Berkeley, Alameda Co.
Bodega Bay, Sonoma Co.
South Farallon Island
Jan. 4 – May 23, 1934
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on the great American Desert. Marsh Hawks were fairly common across Nevada as were Magpies; these latter birds being seen chiefly along the Humboldt river in the bottomlands + willow areas.

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Jan. 4-
acc. 4262.

359 sex? Ferruginous Rough-leg Hawk.
Near Hanford, Fresno Co., Calif. Brought in by Mrs Allen. Found Dec. 30, 1933 hanging on a fence. Skeleton

Jan. 17-
acc 4272

360 ♀ Chalcophaps indica — Skeleton only
361 ♂ " " — Skeleton only
362 ♂ " " — Study skin

These three birds brot in by E. W. Gifford from his aviary in Oakland.

Jan. 18-
acc 4273

363 ? Melospiza l. gracilis
From H. W. Carriger, Oakland, Alameda Co on Jan. 17. No data received but

Jan. 24

presumably taken Jan 16 somewhere about Oakland.

Jan 24

acc 4274

364 ♂ im Sharp-shinned Hawk

Picked up in Berkeley Jan. 22 by Dr C. H. Wills 426-17th Street, Oakland. Badly injured wing, apparently shot. Saved as complete skeleton

acc 4274

365 ♂ Coast Varied Thrush

Picked up at Boulder Creek, Santa Cruz Co. on Jan. 21, by Mrs A. S. Allen

Jan. 25

acc 4277

366 ♂ California Quail

Grizzley Peak Blvd. near Marin Ave, Berkeley. Picked up by Sumner C. Brooks. Had evidently been struck by a car. Interesting because some lost tail feathers are in process of renewal and it is a last years bird as shown by certain juvenal coverts on wing that have

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Jan. 29 =

been retained.

Jan. 29 -
acc. 4279

367 ♂ Sonoma California Thrasher 111.0g.
368 ♂ Point Pinos Junco 19.2g
369 ♂ Point Pinos Junco 17.1g

These three birds as well as 4 brush rabbits and 1 perognathus are the gift of E. L. Sumner, Jr. collected on Jan. 28, 1934, Rolph Ranch, 1700 ft. Corte de Madera Creek, San Mateo Co., Calif.

I See W. Russell's notebook for the mammals of this accession.

Feb. 1
acc. 4287

370 ♀ Anna Hummingbird 3.5 grams

Found dying Feb. 1, at Cedar and Shattuck by Jean Saladava, 1521 Grant St. Berkeley. Study skin.

Feb. 8 -
acc 4287

371 ♀ im California Quail 180.9g.

Brot in by E. L. Sumner Jr. Picked up Feb. 6, Mills College campus Oakland. Head collided with some object

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Feb. 10-

acc 4291

372 ♂ Sharp-shinned Hawk
Found dead by Prof. S.C. Brooks on Woodmont Ave., just outside Berkeley city limits, in Contra Costa Co. Calif. Feb. 10-

Feb. 11

Left Berkeley 5:30 AM. for Bodega Bay, as Dr Linsdales guest to count the Black Brant for the fourth annual census in California. Arriving at Bay the count was taken at 8:45 at which time the Brant were scattered out feeding, being concentrated chiefly in the central part of the Bay. Although the water was choppy and the birds were bobbing up and down considerably, a close count was obtained by Dr Linsdale with his 25 power telescope. He has the actual figures, the approximate number being 2500. By 11:30 (and before) the Brant were gathered in great "rafts" of several hundred so another count was not feasible.

Around the buildings were observed California Linnets, Say Phoebe and Black Phoebe. Along the ocean beach we found a dead Murre and we observed a Pipit foraging among drift material close to the bottom

of the sea cliff. In the surf were a ♂ + ♀ Surf Scoter. In the quiet waters of the bay in addition to the Brant we saw Red-breasted Merganser, Pied-billed Grebe, Western Grebe, Farallone Cormorant, Mudhens, Surf Scoters and various Gulls while on the mud banks at the south east end were flocks of Marbled Godwits, Knots?, Western Willets (few) many Gulls, and several Pintails were seen. Also many Sandpipers.

Drove down to Tomales Bay, on the way seeing Migrant Shrikes, Pipits, White crowned Sparrows, Meadow Larks, Robins, several Ravens and Crows, One Great Blue Heron. At Tomales Bay several thousand Brant were scattered about which I presume Moffitt of the State Fish and Game Dept. had counted. We kept abreast of one small flock of some 25 birds as they were flying down the bay and by the speedometer ascertained that they were traveling at a rate of 25 miles per hour and a trifle faster at times. They seemed to follow the contour of the bay shore finally joining a group of several hundred feeding close to shore. From the highway, 100 yards distant were these wild Brant feeding on Eel grass

apparently little concerned by the presence of moving cars on the highway and people a few blocks away on the shore. Thru the glasses they could be seen to reach down with their long necks and occasionally long streamers of the grass were brought to the surface and swallowed. Some were observed to tip up vertically and feed as mallards so often do. Some little animosity was displayed toward individuals by other birds.

Returned to Berkeley by 6:00 P.M.

Berkeley, Alameda Co. Calif. MVZ.

Feb. 15.
acc 4294

373 ♂ Cyanocitta stelleri 128.4 g

Brought in by E. L. Sumner Sr. from Strawberry Canyon, Berkeley, where it was caught by a C.C.C. worker in a rat trap Feb. 13.

Acc. 4297.

374 ♂ Junco 19.0 g (after several days)
375 ♀ Junco 18.5 " "

Brought in by Mr Brighton Cain from Boy Scout camp, Smith Reserve, Oakland, Alameda Co. Calif. Feb. 12 - Both birds banded

Behle 1934. Berkeley, Alameda co. Calif. MVZ - U.C. 118
Feb. 22.

Both juncos were badly decayed and bloated around the abdominal and vent region and the tail of the ♂ literally "fell to pieces."

acc. 4299

376 ♂? Pipilo m. falcifer
Taken by E. T. Hooper Feb. 18th in mouse trap in upper end of Strawberry canyon.

acc 4301

377 ♂ Buteo b. calurus
Brought in to MVZ Feb. 19th by Mr Brighton C. Cain. The bird found disabled along the roadside at Richmond, Contra Costa co. by Mr Leffler about Feb. 15th. ~~Skin put up by D. H. Feathers.~~ Saved as skeleton.

acc 4304

378 ♂ Ixoreus n. meruloides Skeleton only
J. B. Adams, Carmel, Monterey co, Calif.
Feb. 27, 1934. 77.3g.

Behle 1934 Berkeley. Alameda Co. Calif. MVZ. H.C.

Feb. 28-

acc 4303

379 ♂ Gould Song Sparrow 20.4 grams

380 ♀ Nuttall White-crowned Sparrow 27.8 grams

381 ♂ Nuttall White-crowned Sparrow 33.7 "

These three birds taken by J. Grinnell on Feb. 27 on the Sanddunes at Salmon Creek 2 miles N. Bodega Bay, Sonoma Co. Calif.

382 ♀ Sanderling 55.2 grams

383 Snowy Plover 42.4 g

384 ♂ " " 39.4 g

385 " " 39.1 g

386 " " 43.2 g

The above five birds taken by J. Grinnell on Feb. 27, on Ocean Beach at Salmon Creek, 2 mi. N Bodega Bay. Sonoma Co., Calif.

March 2-

acc. 4305

387 ♀ American Bittern

Brought in by G. Tonkin. Picked up Feb. 26, 1934. 4 miles west of Gridley, Butte Co. Calif.

An interesting case where one wing had at one time been broken and entirely healed but with a decided bend in the humeral bone.

Behle 1934- Berkeley, Alameda Co., Calif. MVZ - U.C.

March 3rd
acc

388 ♀ Poor-will - 36.0g

" Found in Clayton, Contra Costa Co. Calif. There were four birds seen capturing moths beneath an arc light and this one flew up and was blinded by headlights of a car and hit by the windshield and injured. Found Tuesday evening Feb. 27th 1934 and given ether March 1." Sent in by Miss J. Geiselhart, Mt. Diablo Union High School.

March 6th
acc 4310

[illegible]

399	♀	Otocoris	alpestris	rubea	25.8g.
400	♂	"	"	"	28.0g
401	♂	"	"	"	26.6g
402	♀	"	"	"	25.2g
403	♂	"	"	"	28.0g
404	♂	"	"	"	26.5g.
405	♀	"	"	"	26.4g
406	♂	"	"	"	28.4g
407	♂	"	"	"	28.6g
408	♂	"	"	"	27.6g.
409	♂	"	"	"	26.5g.
410	♀	"	"	"	27.2g
411	♂	"	"	"	27.9g

Berkeley, Alameda Co. California . MVZ . N.C.

March 6.

412 ♂ Otocoris alpestris rubea 28.4g.
413 ♀ " " " 28.9g
414 ? Junco. ——

The 15 Horned Larks came from Dry creek, 10 miles NE Oroville, Butte co, California. Collected by W.B. Davis on March 3rd. Put up March 6th, weighed that day so weights are probably all short.

The Junco has the same data except that it came from 6 miles N.E. Oroville.

March 15.
acc 4314

389 ♂ Spotted Towhee no wt.

Taken by E.T. Hooper at head of Smith Canyon, East of State Deaf School Berkeley, Alameda Co., Calif. on March 11. Caught in mouse trap.

March 22.
acc 4320

390 ♂ Otocoris alpestris actia 26.3g
391 ♂ " " " [Bird washed] 27.6g
392 ♂ " " " 28.2g
393 ♀ " " " 24.9g

These four birds collected on March 19, and sent to me by Miss Ynez Whilton, Hotel Tulare, Tulare, California. They

were taken within a radius of 1/2 mile. On the road to Toll House about 2 miles southwest of Friant, Fresno Co, Calif. In the low foothills 600-800 ft. Received at MVZ March 20, put up on March 22. Weights several days old. The birds were separate sitting on fence posts when shot.

April 9 -

394 ♂ White-crowned Sparrow. acc. 26.8 g.

Found dead in road, Strawberry Canyon Berkeley April 9 by Miss M. S. Albro.

395 ♀ California Quail. acc 4322 199 grams after 4 days.

Picked up in Golden Gate Park, San Fran. after having been struck by a car. Brought in by Miss D. Sutton whose father picked it up. Saved as Skeleton only. Leg broken. Just ready to lay eggs.

Behle
1934.

South Farallon Island

April 13

With a party of 16, members of the U.C. Entomology club left San Francisco at 7:00 A.M. on U.S. Navy tug "Undaunted". Weather windy, cloudy and cold, water rough. Arrived at islands about 10:20. No restrictions were placed on us, except no collecting and we wandered pretty much over the entire place for two hours and then were shown through the various power plants, radio station and the light house.

The nesting season in general was just starting and not all the birds that nest on the islands were seen.

Rock Wrens were common on the islands being chiefly near the dwellings and on the rocky slopes up toward the light house. One I saw for an instance appeared to be in juvenal plumage.

Two sparrows probably Savannah Sparrows were seen on the island.

Western gulls were of course the most abundant birds and numbered thousands. They had not started nesting or egg laying and gave no indication even of having paired off. At least a dozen dead ones were found and one was found on

the trail still alive having gotten there since we went out along the same way. Its heart was still beating and it moved its mandibles slightly but otherwise seemed powerless. The keeper also commented on the fact that a disease seemed to be taking a good many gulls.

California Murres were more numerous than I had expected to find after hearing recent reports. I estimated roughly 200 but very probably saw only a part of those present. For the most part they were gathered in groups preening and resting with occasional fights taking place. When sufficiently disturbed they took to wing. I assume mating had not yet taken place. Some degree of territorialism seemed manifest in that they were located some 20 yards from the water and mostly on the north side of the main island. The light-house keeper remarked that these birds were more numerous this year than for the past few years yet one is amazed when he thinks that it was this bird that supplied most

of the eggs for the San Francisco markets in the times of the "Eggers."

Tufted Puffins were most conspicuous with their reddish orange bills and feet to match. In general they were wary but now and then we could climb to the top of a ridge and look over and see them sitting below. If then alarmed they would fly with a few beats and then soar rapidly downward with feet stretched out flat behind them. They seemed to be definitely paired off and there was some indication of nest building. I noticed the Murres also held their feet out flat behind when in flight.

My greatest surprise was seeing the advanced stage of the Farallon cormorants in the breeding cycle. In the first place there were fewer of these birds than I had expected to find, scarcely a hundred being noted. Their nests were located near the top of the ridge on the main breeding area mostly on the south side. The only eggs seen were heavilly incubated and many were just hatched. Young of all ages were seen up to some individuals some three

weeks old. These had their primary feathers started in growth and were able to scramble over the rocks away from intruders. The gular pouches were white as contrasted to the orange yellow of the adults. Adults guarding the young could be approached to within 6 or 8 feet before they would fly and generally seemed unconcerned over our presence. When we got real close they would croak and grunt like pigs and weave their heads back and forth in a threatening manner. The older young were belligerent. Remains of good sized fish were deposited around the nests and the usual filth prevailed with countless flies. The nests were very different in construction from those of Great Salt Lake birds in having no mud and not being built up over a few inches. They were made of small pieces of drift wood the size of your finger, coarse weed stems and many feathers chiefly gull primaries and tail feathers. Many of the adults standing near the nests had their plumage ruffled out presumably

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1934

drying as has been reported for these birds. The eyes of the adults appeared blue.

Some Baird cormorants were seen in flight conspicuous because of the white flank patches.

In some places at the foot of cliffs on the north side of the island piles of nesting material were being accumulated but I do not know by what birds. These attracted me because numerous bunches of Hydroids were present attached to coraline sea weed.

April 21

396 Intermediate Wren-tit Skeleton only

Caught in mouse trap 25 yards up creek from the Engineer's Bridge, Strawberry Canyon. April 21, 1934- E. G. Linsley Saved as skeleton. Had on it band no. L. 57054. Accession. 4334.

April 24, Mr E. L. Sumner tells me this bird was banded on Feb. 3, 1934 by Charles K. Sprinkle.

April 28
acc 4343

397 ♀ Spotted Towhee Skeleton Only.

Taken in mouse trap April 28, 1934 in Strawberry Canyon near Engineers bridge by Miss Elizabeth Stevenson.

May 3-

398 ♀ juv. Anna Hummingbird 3.1 g. acc. 4344

Gift of Gordon Bolander, 435 Vernon St- Oakland. Found dead on porch May 2, apparently having flown against the window.

May 18

415 Pygmy Nuthatch acc 4358 wt. 12.0 grams.
Sent in by H. P. Davis. collected on May 16, 1934, at Almanor, Plumas Co., Calif. Taken from nest in small hole in dead pine tree, six eggs in nest. See correspondence for data on chickadee, Fox sparrows etc.

acc. 4361

416 Pipilo f. petulans 56.5 grams
Received from Earle Marsh, thru J. Stevenson collected May 18, 1934 at Berkeley, Alameda Co., Calif.

May 23.
acc 4366

417 One nest with 3 eggs of Calif. Brown Towhee taken May 22, 1934 by W.B. Davis on Dwight Way Hill, Berkeley, Alameda Co, Calif. Taken in Baccharis bush about 5 ft. from ground. ♀ in Davis collection

Behle, W. H.
1934
June 16-25
Salt Lake City, Utah

Behle, W. H.
1934

Salt Lake City, Utah,
June 16 – 25, 1934

Behle
1934-

Salt Lake Airport, Salt Lake Co., Utah
June 16.

Spent from 3:30 to 5:30 P.M. on the salt flats west of the airport looking for horned larks and met with fair success. Nine were collected during that time and many more seen. Some were seen along the road in bushes but mostly they seemed to be on the ground resting in the shade of clumps of _Salicornia_ or pickle weed. They had to be flushed from these positions by approaching within a few feet. When raised they would proceed some 50 yards by a slow undulating flight. At times they would hop along the ground a few times before taking off. They were definitely paired, but two pairs might be close together.

A few were observed feeding in open spaces probably picking up seeds and once I thought I saw a ♂ scratch the ground. Those birds feeding in the open when approached would run quietly along several yards away from you and if still persued would take to flight. In one ♂ shot from a _Sarcobatus vermiculatus_ bush a large spider was noticed half eaten. Seeds were found in

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1934

June 16

several stomachs

In an area near the beginning of the associated-gun-clubs road several ♂♂ were heard singing presumably proclaiming their territories a ♀ was shot and near by a ♂ was noticed which was approached. It flew in an easterly direction some 50 yards. again when approached it flew in another direction 75 yards. again when approached it flew about the same distance in another direction. It seemed to have a territory with definite bounds beyond which it would not fly. It would usually land in a greasewood bush at the edge of the boundary. When this birds mate was shot and then it was approached the first excitement made it fly several hundred yards away. I remember that at the time another ♂ immediately appeared and chased the intruder back to its own territory. After following this ♂ around its territory several minutes it was shot.

In this area there is much

West of Salt Lake airport, Salt Lake co. Utah

June 16

bare ground. Some of the more salty areas had only Salicornia growing. Other areas had greasewood. Horned Larks were found in the salt weed areas but were most abundant in the greasewood areas.

Long-billed curlews were numerous in fact moreso than I had expected. In an area of about 1½ square miles eight were noticed. Our presence seemed to disturb them because they took to the air with raucous calls.

Three lark-sparrows were shot in the same locality as the Horned Larks

418 ♂ O. a. leucolaema.
419 ♂ juv. " "
420 ♀ " "
421 ? juv. " "
422 ♂ " " "
423 ♂ " " "
424 ♀ " " " Eggs
425 ♀ " "
426 ♂ " "

Behle
1934.

Great Salt Lake, Utah

June 25

Started at 7:00 A.M. for White Rock and Egg Island in Dr Thomas C. Adams' sailboat using my big motor. Others of the crew were a Mr Borah, one of the ~~editors~~ feature writers of the National Geographic magazine who is writing an article on scenic Utah, and Mr Hart who is a local engineer. His son was the fifth member. A stiff breeze blew us along at a fair rate toward the south end of Antelope Island. About two thirds of the way across we came upon great banks of a small shore bird which I took to be Sanderlings but am not positive of my identification since we could not get close to them. There must have been nearly two thousand of these birds in sight at one time stretching across half the horizon in flight. For the most part they were gathered in flocks of several hundred and went wheeling around in all directions. I marveled at the "flock-mind" as I watched these closely packed masses turn one way and then

another in unison. A flock would fly toward us, suddenly turn straight up and would then appear as a glittering mass as the silver breasts shone in the sun. Often they alighted in the water and floated relatively far apart. Could they have been feeding on brine shrimps?

We landed half way up the West side of the island for lunch and I walked up the beach for a short distance noting dozens of _Uta stansburiana stansburiana_ lizards on the high gravel beach. In one area there was evidently fresh water seepage along the shore and a slight marsh was present with sedges, fox tail and other grasses and countless insects swarmed around. I imagine it would be an interesting ecological problem to study such an association.

Shortly after we resumed our trip this time using the motor because of the becalmed lake. We noticed a line of pelicans

Behle
1934

Great Salt Lake, Egg Island, Utah
June 25

coming across the lake. They were flying in a south easterly direction from Hat Island I imagine. They flew to the shore of the island and turned south along the shore line. Never before have I seen so many stretched out in one long string. As they swung south along Antelope Island I counted the number as best I could as they passed by a certain rocky point and judged there to be about three hundred. They were stretched out in a long wavey line and exhibited the "follow-the-leader" effect of going over imaginary hurdles or they would dip down as each past a certain point. Could air currents be the explanation of this? Shortly following the main flock a small one of about twenty came along flying in a single line in the same direction. With the exception of two birds in the middle who kept beating their wings continuously

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Great Salt Lake, Egg Island, Utah
June 25

all would fly awhile and then pause just as the leader did.

We passed White Rock and proceeded directly to Egg Island. I judge it was about noon when we saw the pelicans and probably two hours later that we reached the island. As we approached I counted thru the glasses 8 herons and all the cormorants seemed congregated on exposed tufa near the south end. California gulls were everywhere. As we approached, the cormorants moved around on the East side of the island. About 15 of the number flew and these I assumed to be adult birds. The remaining members of the group numbering about twenty could not fly although they would run rapidly toward water trying to beat their wings. These were all full grown birds of the year and once they reached the water they swam away too rapidly to be caught.

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Great Salt Lake, Utah, Egg Island

June 25

The pouches of these young were pale yellow. Hidden among the rocks were found six young that hadn't yet attained full size and these were banded with band numbers 618202, 618203, 618204, 618205, 618206, 618211. all of the 34 series.

Most of the cormorant nests were abandoned for the season but on the East side were three nests that contained eggs. Two had two eggs apiece and the third had three eggs. These nests were not tall and mud cemented like most of the nests and seemed apart from the majority of the nests. I don't remember having seen them two years ago so I assume they had been built this year or last. Eight nests had not been used this year. About 35 or 38 looked as if they had been utilized. About 8 skeletons of half or three quarter grown cormorants were noted on or near nests showing a high mortality. The cormorant colony seemed reduced in number compared with two years ago. I am

inclined to believe that none of the young birds produced this year could yet fly. If this were true the number of young the colony produced this year would be only about twenty five.

The number of Treganza Herons seemed to have diminished too. Walking around the island I found only ten nests that showed evidence of having been used. Only one 3/4 grown heron was found and that was banded with band No. 34 618201. All others had flown before we landed.

The number of gulls on the island I judged to be 1500. Everywhere were cherry stones which substantiates the claims of farmers in Davis Co. that they are detrimental to the cherry orchards. All young gulls seen were in juvenal plumage.

As we approached White Rock five cormorants were seen resting on the rocks but only about 500 gulls nested there.

The return trip was uninteresting from an ornithological point of view

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1934
July - Aug.
San Francisco Bay region

Behle, W. H.
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San Francisco Bay region
Alameda and Contra Costa Cos.
July 29 – Aug. 3, 1934
Spec. Nos. 427 – 471

but exciting from a navigators point of view. Bucking giant waves and wind and rain and after running aground and hitting rocks we arrived at Saltair at 12 midnight after one of the worst storms of the season.

Byron Hot Springs, Contra Costa Co. Calif.

July 29-

Started at 10:00 AM with Mrs Behle to Horned Lark country so that we could collect a few and locate a good area where they exist in abundance and within reasonable distance so that weekly trips could be made for molt studies etc. We had been told that such conditions would be found along the Marsh creek Road and over near Byron. Here we drove via Walnut creek, Concord, Pittsburg, Antioch, Oakley, Brentwood to Byron. We drove over to Byron Hot Springs and walked thru the waste-high salt brush and onto the white alkaline flats with Salicornia. No signs of Horned Larks were found in this distinctive area. I assume there was too much vegetation since the alkaline conditions were similar to those of the salt flats west of Salt Lake City where I found

the larks abundant. In driving around the region we found an area about one-half mile west of the Hot Springs. Here an irrigation canal, cement bottom and several yards wide, flowed north and south. Some 50 yards north of the road was a body of water forming a semi-swamp. It gave evidence of having recently receded because mud was still soft in low places. A herd of cattle grazed around and where the area was soft their hoofs had sunk making small hollows and rough turf. In the higher areas it was extremely dry with little or no vegetation except some dry grass and foot high weeds. In this area on both sides of this water were hundreds of horned larks, I should say almost thousands. For the most part they were quietly resting on the ground. Some were feeding, others were squatting in the shade of bushes. They were in great flocks of 50 to 100 in a group. When I would shoot perhaps several hundred would rise and be in the air at once. In some cases there were a few that seemed isolated. In

Behle
1934

1/2 mi. S Byron Hot Springs
Contra Costa Co. Calif

July 29.

427	♂	O. a. actia	31.1 g.	Dissected - not saved.
428	♂	" " "	29.5 g.	Saved as skin.
429	♂	" " "	28.2 g.	" " "
430	♀	" " "	25.8 g.	" " "
431	♀	" " "	27.0 g.	Dissected - not saved.
432	♀	" " "	29.1 g.	" " "
433	♀	" " "	26.9 g.	Saved as skin
434	♀	" " "	28.5 g.	" " "
435	♂	" " "	30.0 g.	" " "
436	♀	" " "	25.5 g.	Dissected - not saved.
437	♂	" " "	33.1 g.	" " "
438	♂	" " "	31.0 g.	" " "
439	♂	" " "	30.4 g.	" " "
440	♂	" " "	29.0 g.	" " "
441	♂	" " "	30.0 g.	" " "
442	♀	" " "	30.4 g.	Saved as skin
443	♀	" " "	27.9 g.	" " "
444	♂	" " "	28.7 g.	" " "
445	♂	" " "	31.5 g.	" " "
446	♂	" " "	30.0 g.	" " "
447	♀	" " "	25.5 g.	" " "

Behle
1934.

the shade of fence poles one or two would be resting.

I was astounded at the abundance of these birds. I think they were concentrated there because of the water. It is my feeling further that mostly the young are flocking and adults perhaps still isolated.

Twenty one birds were collected in an area 50 yards square. As fast as one was prepared another one would be taken. Upon shooting the flock would rise and move off maybe 25 yards and land or perhaps they would wheel about and land in practically the same spot if I were not there. They seemed to prefer the damp area as much as neighboring dry areas.

Of the twenty birds picked off I judge most are birds of the year and they seem to be nearly thru an complete molt. It would seem as if I had missed the post juvenal molt. One or two of the lot are obviously adults but these have the annual molt well

July 29

under way.
These associated with a few Killdeer and Blackbirds. One Aiken seen in Eucalyptus near Hotel at the springs.
Here is conclusive evidence of a complete wing molt.

Behle 1934. 1/2 mi S. Byron Hot Springs, Contra Costa Co, Calif. 144

July 31

Left Berkeley at 4:45 arriving at Byron Hot Springs at 6:15 PM. Speedometer registered 52 miles from the campus. A stiff gale blowing from the west. Some little wind in Berkeley before we left but here it is difficult to walk against and the parked car is constantly rocking.

Walked over the area where the larks were so abundant Sunday but not one was raised. The water in the slough previously mentioned has practically dried up leaving cracked mud. Six Killdeer are hovering around and a flock of Sandpipers.

For one hour I wandered around the fields looking for larks. There were none around the salt-bushes and sloughs of the hot springs. These would have afforded good protection. There were none in ~~[illegible]~~ ground squirrel holes nor at the base of slight hill. Several ground squirrels were seen and one Jack Rabbit which sprang up 75 yards ahead and ran like mad down a dried up canal. His ears

July 31

were blown over to one side and as he leaped the wind seemed to blow him slightly off course. - A shrike was resting on the lee-ward side of a huge pile of baling wire and facing toward the wind it flew several yards away coming down to rest in a shallow dried up canal still facing the wind. upon still closer approach it flew further.

Finally I spied three larks in flight across the road in a broad open expanse. These I approached. When within 50 yards they took alarm and rose up. One I managed to pick up in the field of the glass and he soon landed about 40 yards away and stood facing the wind but with head up and alert E. I thought I heard a chirp and he was joined by a second bird. There came then a third one and they lined up three abreast facing the wind. Within a few seconds two of the three flew. The remaining one remained

July 31

quietly squatting and finally flattened down close to the ground. It seemed to be behind a slight rise in the ground. The dry grass is 3 and 4 inches tall. The bird apparently found protection thusly. While sitting in the middle of this field I could hear an occasional single chirp-like note.

The bird under observation showing no signs of moving I watched the field soon seeing a single bird rise followed by four others. They flew 2 or 3 feet above the ground diagonally against the wind ↑← wind for some yards then alighted. Soon they rose again and flew around causing others to rise till a flock of 20+ birds were in the air. They very shortly all alighted. I watched the spot for ten minutes seeing no movement approached. They were wary and roused up to land again. Some settled down out of sight, others had their heads up. Visibility becoming I returned to the car at 7:30 P.M.

Rather chilly due to the wind. The

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1934

July 31

fog seems to be just the other side of the Diablo Range. This area at the edge of the foothills at the commencement of the open flat valley.

Am rather disappointed at not seeing more birds or being able to get closer. It has been worth while to get their reaction to strong wind. I doubt if they are feeding. Their flight seems as strong as any birds under the circumstances. I conclude that for protection they squat down in open fields behind grass possibly in depressions or behind slight rises. For the most part they remain quiet but a certain restlessness is exhibited in the movement around the field. The getting up of one bird usually starts the flock up. They are not silent but utter chirps. Some evidence that some are paired yet and perhaps the notes are meant for their mates. Gregariousness after breeding season shown.

1/2 mi S. Byron Hot Springs Contra Costa Co., Calif.

Aug. 1

Arose at 4:30 AM as dawn was breaking and walked out into the field. Only an occasional note was heard. One bird flushed, flew 15 yards and settled. Wind still blowing hard.

6:00 A.M. Sun well up now. Breeze still blowing but not as strong as last night. Wind lasted all night continually. While eating breakfast I noticed several flocks of larks from five to thirty in number in a flock. They do not travel head on into the wind but proceed sidewise as a rule. When one does occasionally fly into the wind the flight is undulating

Cottontail dashed across 50 yards at 4:45 and down a hole. Five killdeer around in a flock. Rose out of a field. Flock of Blackbirds working west along the ground as though feeding.

Once again at 6:30 I walked into the open grass field seeing only a couple of small flocks in low flight. I then returned to the canal. Altho the main body of water noted Sunday has dried up there is a small body 10 ft. across a little beyond. Noticing larks here I walked over. For the next hour and a half I shot almost as fast as I

Aug. 1

could put one bird in a cone. Often three or four would be dead around me when I shot them while kneeling down preparing one bird.

Notes on individuals will be entered later but I shall state here that in the lot were a couple of juvenals just commencing their 1st full molt. In the next half hour I was able to pick out three or four more either using the glasses or with the naked eye.

I find it rather easy to distinguish the males from the females by the head markings and when any drab-headed one comes along and is shot it usually proves to be a juvenal.

Certainly this tiny area of water and damp ground is an attraction to these birds since flock after flock come in and settle down. They always swing around and come "in" facing the wind. I believe it is seeds or insects around the sand they are after but some have appeared

Aug. 1

to drink by crouching at the edge and dipping the head down several times. If drinking they don't tip the head back. They are always wary of my presence with head up and if they pick up food it is after long hesitation and watching.

Some flocks are obviously feeding in the open but no single flock seems to remain long in one place. In other words there is considerable moving around of flocks. When a flock moves it is usually started by one arising then maybe one or two more and finally all are on wing.

♀ 448 Otocoris alpestris actia

Plumage generally has a fresh appearance. Primaries 1-7 new and full grown. No 8 3/4 grown and No 9 just beginning. Alula has two large feathers almost completely grown. Secondaries 1-4 new and full grown. No 5 new but only half grown out. No 6 is old. 7, 8, 9 are distinctive in appearance the three that Dwight has called

tertiaries. All three are new. All this applies to the left wing. The right wing is the same except the old No 6 secondary has dropped out. All coverts new but some of inner side still possessing sheaths. Tail feathers all new but outer pair only half grown. Few yellow pin feathers showing on neck. Few sheaths showing on breast. All rest of plumage new.

[Dorothy's first bird]

♂ 449 Otocoris alpestris actia 28.1 grams (Immature Bird of year)

This bird is a bird of the year as shown by certain unmistakable juvenal feathers as yet retained. The alula is made up of juvenal feathers. Primary No 9 is old as is the covert. No 8 is new but just beginning to grow. Its covert is also just starting. Nos. 7, 6, 5 are new but 6+5 are broadly tipped with buff. Is this a character for finding birds of the year. No 4 is half way grown. Rest of the primaries are new and full grown. Secondarys No. 1-3 are new. 4 is half way grown. 5+6 are old. The proximal three are new. All wing coverts except those mentioned are new. Both wings the same but on the right wing in skinning new

Behle 1934

Aug 2

1/2 mi S. Byron Hot Springs, Contra Costa Co. Calif.

primary No 7 fell out. Outer rectrice pair just commencing. 2nd pair half grown. Remainder new. Rest of body plumage new. On head and neck are retained as yet juvenal feathers. On forehead and sides of heads and sides of neck and just above the scapulars are brown dull juvenal feathers.

♂ 450 Otocoris alpestris actia (adult)

Primary No 9 old - No 8 1/3 grown. Rest new. Secondary No 4 1/3 grown. Nos. 5 & 6 old. Remainder secondaries new. 9th Primary covert old. Covert of No 8 primary is growing. Secondary coverts all new. Under covert of secondary No 4 was still growing but fell out. Tail: all new but outer pair stubby and just growing and second outer pair 1/3 grown. Head practically all molted but most of neck is old and [illegible]ed. Some deep new ones seen. Breast covered with pin feathers. I should certainly conclude this an adult bird and if so it means ~~the~~ annual molt is practically complete. Wing spread 27 cm.

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aug 2

1/2 mi S. Byron Hot Springs, Contra Costa Co., Calif.

♂ 451. Otocoris alpestris actia 30.4 grams

At last a juvenal in early post-juvenal molt. Primaries 9, 8, 7 old. 6 is a little more than half way grown. 5 is 3/4 grown, 4, 3 & 2 are new and seem full grown but 1 is only 1/3 grown. Primary covers 9, 8, 7 are old. Nos. 6 & 5 are growing to correspond with primaries. All other primary coverts are new. The distal 6 secondaries are old as yet showing no indications of replacement. The proximal 3 secondaries are confused. No 7 appears new but 8 & 9 are missing. Alula is old. The median coverts are old. The lesser coverts are all new. Marginal coverts are old. The greater coverts are new over the secondaries + those over the primaries have been noted. Under wing coverts are new. A row beneath the marginal coverts appear as long sheathed feathers. Some of the upper scapulars are coming in new but the lower ones and the tertiaries with their coverts are old. Tail coverts both upper and under coming in new but rectrices are all old. Lower part of back is new but remainder old. Feathers on the upper part of the femoral tracts new, rest old. Breast

Aug. 2.

<u>1/2 mi S. Byron Hot Springs, Contra Costa Co., Calif.</u>

neck and head all juvenal feathers. Flanks new? [check on this - they come from the lateral tracts.]

♀ 452 <u>Otocoris</u> <u>alpestris</u> <u>actia</u> 26.3g
Skull presses in. Probably a ♀ of the year almost completely molted. 9th primary half grown, rest new + full grown [Nos 6, 5 + 4 rather widely buff-tipped. Can birds of the year be separated on this character?] Rest of feathers all new. Few yellow sheathed feathers still on chin. Outer pair of tail feathers not full grown.

– 453 <u>Otocoris</u> <u>alpestris</u> <u>actia</u> 26.9g.
Primary No. 9 old. 8 starting, rest new. Secondaries 1, 2, 3 new. 4 still in sheath, 5 + 6 old, 7, 8, 9 new. All coverts + alula new. Inner 4 pairs rectrices new, 5th pair 3/4 grown, 6th pair in sheath. Body + head feathers new except possibly some on lower abdomen and sides of neck.

Aug. 2

1/2 mi. S. Byron Hot Springs, Contra Costa Co., Calif.

454 Otocoris alpestris actia 24.7g.
Juvenal bird commencing first fall molt. 1st primary (No 1.) 3/4 grown. Nos 2, 3, 4, 5 new. 6 7/8 grown, 7, 8, 9 old. Distal 6 primaries old, 7th new, 8+9 dropped. Alula old. 8, 9, 7 primary coverts old, rest new. Secondary coverts all new. Median coverts old, lesser coverts new. Marginal coverts old. Scapulars + tertiaries with coverts are all old. Tail coverts starting new. Tail old. Flanks part new. Feathers of femoral tract new. Rest of body head + neck old.

♂ ad 455 Otocoris alpestris actia 31.6 g.

♀ 456 " " " 26.0 g.

♂ 457 " " "

♀ 458 " " " 28.3 g

♂ juv. 459 " " "

♂ 460 " " " 30.5 g

♂ 461 " " " 23.2 g

Aug 3

1/2 mi. S. Byron Hot Springs, Contra Costa Co., Calif.

♂ 462 Otocoris alpestris actia 25.5 g.
Evidently an old male well under way in its molt. Differences manifest in the wings. Left wing: Primaries 9, 8 old; 7 is over half grown, 6, 5, 4, 3, 2, 1, all new. In secondaries no. 1 is half grown. No. 2 has fallen out or was shot out and no sheath has taken its place altho a dark place in the skin indicates the papillae; 3, 4, 5 new. No. 6 shows as an unopened quill very small. Nos. 7, 8 present + new but No. 9 is missing. Right wing: Nos 9, 8 primaries old, 7 new + little over half way grown. Remainder new. Secondaries No. 1 half grown. No 2 missing, rest new except 9 which is missing. Tail practically all in molt at once. Outer pair old. Next to outer pair gone, 3rd from outside just commencing, 4th pair 1/3 way, 5th pair half way + inner or middle pair grown between 5 + 4th pairs. It would seem from this that the second pair from the center dropped first followed by the middle pair, then the 3rd pair from the center, then the 4th, 5th + finally the outer pair.

From pairs of uppertail coverts are arranged on either side of the center

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Aug 3

1/2 mi. S. Byron Hot Springs, Contra Costa Co., Calif.

pair of rectrices. Of these 4, the middle are the longest and then they grade on down. The outer left covert is but a papillae but on the opposite side the one corresponding is pushing out of the sheath. Unequal growth manifest here as in some of the members of the rectrical pairs. Seems to be 6 pairs of under tail covers, the center ones the most grown & grading on down.

arranged so.

All coverts on wing new except those corresponding to old remiges. alula old. Some of inner lesser coverts still in sheaths. Scapulars & tertiaries new. Rump growing. Most of back feathers new. Abdomen half & half. Flanks new. Breast new. Neck all old. Head & chin coming in new. Black on throat is old. Feathers of crural tract on leg appear old.

Acc 4408

♂ juv. 463 Bluebird - Sialia m. occidentalis

Taken on Aug. 1, from nest-box. Oakland, Alameda co., Calif. by M. Seibert, Jr. Saved as study skin

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Berkeley. Alameda Co., Calif. MVZ - U C.

Aug 3

1/2 mi. S. Byron Hot Springs, Contra Costa Co., Calif.
[Bird of the year]

♀ 464 Otocoris alpestris actia 25.5g.
Left wing: Primaries 9+8 old, 7 3/4 grown, rest new. Secondaries 1+2 new. 3 fallen + no sign of replacement, 4, 5, 6, old, 7+8 new + 9 fallen. Alula old. Primary coverts 8+9 old. All other wing coverts new. Right wing same except secondary No 8 also fallen. Tail: Inner pair rectrices 1/2 grown + grade down to 5th pair which are still entirely sheathed. Outer pair old. 4 upper tail coverts grade down from the center ones which are as tall as the middle pair of rectrices. 4th or outer pair are just emerging from sheath. Under tail coverts new + practically grown. Crissum new. Rest of body plumage new. Head new except for a few juvenal feathers on the upper neck + base of the head - so then a bird of the year.

♂ 465 Otocoris alpestris actia 31.2 grams
Old bird with molt nearly complete. 8th outer primary one third grown. All rest new except outermost 9 which has dropped out and there is no evidence of a new feather growing there. Secondaries 1, 2, 3 new; 4 half grown, 5+6 old, 7, 8, 9 new. Tail. Inner pair practically full grown. Rest

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1/2 mi. S. Byron Hot Springs, Contra Costa Co., Calif.

grade on down to outer pair which haven't broken from sheath. All the rest of the feathers on the body and head are new except the alula and the few feathers on the neck & base of head that are old.

The proximal two secondaries are old and the proximal 4 greater coverts are old

♂ 466 Otocoris alpestris actia 28.3
9th Primary old. 8 commencing, rest new. 1-3 secondary new. 4 commencing, 5+6 old. 7,8,9 new. Greater coverts probably new altho some look old. Rectrices new - outer pair just starting, next 3/4 grown. Alula old + some of neck feathers but rest new. Testes ∘∘

♀ 467 Otocoris alpestris actia 24.5 (after 2 days)
Primaries 9, 8 old, 7 coming in 1/6 grown. rest new. Secondaries 1 + 2 new, 3 coming in 4, 5, 6 old, 7+8 new, 9 gone. Last 3 greater coverts old? Tail - outer pair old, next sheathed, next 1/3, next 1/2, next full, middle pair full. Rest of body new except few on neck.
ovary ⁘

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Berkeley, California - M.V.Z. U.C.

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♂ 468 Otocoris alpestris actia 30.0g.
Primaries: 9 old; 8 1/3 grown; rest new.
Secondaries: 1, 2, 3 new; 4 half grown, 5 + 6 old, 7, 8 new, 9 gone. Greater covert no 7 looks part growing. Alula old. Rest of plumage new but a few feathers old on neck sides.

♂ 469 Otocoris alpestris actia 28.0g.
Similar to above, primary 9 old, 8 1/3 grown, rest new: Secondaries 1, 2 3, new. 4 still unsheathed, 5, 6 old, 7, 8, 9 new. Alula old, coverts new. Tail. outer pair still in papillae sheath, rest grade up to new + complete center pair - all rest of the plumage new except trace on neck.

♀ 470 Otocoris alpestris actia 27.3g.
Primary 9 just starting, 8 3/4 grown, rest new + complete. Secondaries 1, 2, 3, new, 4 half grown, 5 + 6 old, 7, ~~8~~ is new, 8 + 9 old or already worn. Tail all new + entire except possibly the outer pair. Alula old - rest plumage new. Ovary ⁂ small regular + uncolored + all same size as if bird of year.

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1/2 mi S. Byron Hot Springs, Contra Costa Co., Calif.

♂ 471 Otocoris alpestris actia 29.2 grams
A juvenile in molt. Primary 9, 8 old, 7 just starting, 6 7/8 grown, rest new + grown. Secondary 1 new, 2 1/2 grown, 3 a papillary sheath, 4, 5 + 6 old, 7 is a papillary sheath, 8 + 9 look new but already worn I check with full juvenal plumage. Alula old - Primary coverts new except outer two corresponding to old primaries. Greater coverts seem all new except proximal one. Proximal # median covert coming in, others new. Lesser all new. Marginals old. Tail - outer pair old, next pair still in sheath, 3rd out a little, 4 out still more, 5th 5/8 grown, 6th or middle pair little less grown than 5th pair. Upper coverts correspond. Under tail coverts coming in. Head + neck mostly are juvenal. Breast coming in new! Flanks new, abdomen coming in.

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Oroville, Butte Co.
Berkeley, Alameda Co.

Behle, W. H.
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Oroville Butte Co.; Berkeley, Alameda Co.
Aug. 5 - 16, 1934
Spec. Nos. 472 - 508

Aug. 5

Early this morning drove with Mrs Behle to Norman, Glenn Co., Calif. looking for O. a. rubea. Years ago Grinnell saw countless Ruddy Horned Larks of this race and also merrilli. However this was in February. We took the road East to Princeton stopping at favorable fields looking and listening but not a lark was discerned. In this 12 mile stretch is much swamp land and consequently many ciconiiformes were seen. One Great Blue Heron was flushed from the side of the road about a mile E from the main highway. On either side of the road was a wide stream-slough too wide to jump. I think the Spalding property was along here. Three dead Great Blue Herons were noted along the road-side within half a mile of eachother. About 9 Snowy Egrets were noted either in fields or trees or flying. In one location 7 Black-crowned Night Herons flew from their perches in a clump of trees. Black birds were numerous.

On the ground just east of the Wild-Creek Gun club I shot a pair

Aug. 5

of Burrowing Owls that were sitting at the top of their hole.

Aug. 6.

6 mi. W. Oroville, Butte Co., Calif.
Aug. 6

♀ ad. 472 Otocoris alpestris rubea 25.7 g.
Primaries: 9, 8, old. 7 still in papillae, rest new
Secondary No 1 new, 2 still in sheath, rest, 1st 6 old,
No. 7 of the odd 3 is old, 8 + 9 new. Alula old.
Coverts all new except outer two primary
coverts. Tail: center pair half way grown,
next pair about same, 3rd pair from center
just starting or is still sheathed, the outer
three pairs are old. This proves that
the feather replacement starts from the
inside and progresses outwardly. I am
not sure yet whether the middle pair
drops 1st or the 2nd pair. There seems a
little unequal growth exhibited in the
members of the second pair. Under
tail coverts all just protruding from
sheaths. Upper tail feathers nearly full
grown. Some of breast feathers old. Chest +
sides new. Back all new. Head most
retarded-: Forehead and front of head
feathers coming in new. Rear of head badly
worn and showing no replacement. Base
of skull and sides of neck old + faded.
New yellow feathers coming on chin + throat.
This bird has lost half the tarsus and
foot and a great pad has developed. On
the other foot the nails are gone and
pads have developed there too

Aug. 6

6 mi. W. Oroville Butte Co. Calif. Aug 6

This rubea race is certainly one of the most distinctive races of the species being especially outstanding in the reddish dark back. The yellow of forehead, chin and throat in ♂♂ seems constant [irregular & unstable in actia] I fancy the bills are larger than actia. The range is limited and I get the impression is becoming more and more so with increased cultivation in the region. One other thing is the remarkable red soil West of Oroville and more or less over the wide area and the close resemblance of the dorsal coloration of these birds to the soil. Could selection have operated to produce this.

aug 6

6 mi. W. Oroville, Butte co. Calif:
aug. 6

♂ad 473 Otocoris alpestris ~~rubea~~ 28.2g.
This is most certainly an old ♂ terribly worn. An excellent specimen to show where molt begins. Head and forehead worn but the yellow superciliary stripe is new and the black area from the nostrils back beneath the eye and over the cheeks are new. Ear coverts are new. Chin and throat new. The tiny row of feathers circling the eye lid are new. Primaries 9, 8, 7, 6 all old. 5 half grown, 4 almost full grown, 3, 2, 1 new. Secondary no 1 just pushing out of sheath, 2, 3, 4, 5, 6, 7, 8 all old, 9 is new. Primary coverts new or old corresponding to their primaries. Alula old. Greater coverts new. Median coverts old. Lesser coverts new. Marginal coverts old. Tertiaries old. Scapulars old, possibly a few new. Under wing coverts ~~old~~. Body all old Tail shows no indications yet. One upper tail covert new

Conclusions: molt starts simultaneous on bend of wing (Lesser coverts + greater coverts) and eye - cheek - ear - throat region. Upper tail coverts start before Tail. Secondary no 9 is first followed by no. 1 + molt of primaries start with no #1 + progress outward

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6 mi W. Oroville, Butte Co., Calif. Aug. 6.

Primary coverts molt with respective primaries

Feathers on femoral tract [upper leg] are starting on this bird. The center of the back has a patch of new feathers & they seem progressing downward & upward but the most new feathers are in the center

♂ ad. 474 Otocoris alpestris rubea 30.8 g.
Here appears an adult bird with molt practically complete. This when compared with No 473 which also seems an adult just commencing molt indicates that adults are as far apart as some of the young I have examined. If the latter is to be accounted for by three broods is not the difference in time of adults accounted for similarly. If they nest real early they molt early. If they raise less than the usual no. of broods they molt early. The time of molts seems to be determined by the nesting season ^or condition of gonads - these birds nest earlier than most birds & molt earlier - why doesn't the nesting season govern the individual also.

Wing: Primary No 9 old, 8 pushing out of sheath, rest new but 7 not full grown.

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6 mi W. Oroville, Butte Co., Calif.

Secondaries: 1, 2 new, 3 1/3 grown, 4, 5, 6 old 7 half grown, 8 & 9 new. [This seems to indicate that these 3 odd secondaries do molt differently and in reverse order from the remainder of the secondaries] Alula old. Coverts all new except outer primary covert. Tertials + scapulars new.

Tail: middle pair 7/8 grown. next pair longer, 3rd pair like middle pair, 4th pair 1/2 grown, 5th pair just out of sheath, outer pair old. Coverts new. Feathers around vent well underway. Body + head plumage all new except sides of neck, base of throat + chest patch of black.

♀ im. 475 Otocoris alpestris rubea 25.1 g

Juvenal in 1st fall molt. Primaries 9, 8 old, 7 still a tiny papillae, 6 3/4 grown, rest new. Secondary 1 new, 2 3/4 grown, 3 dropped out + no signs of replacement, 4, 5, 6, 7 old, 8 3/4 grown, 9 new. Primary coverts new except last 3, greater coverts new, median old, lesser new. Outer 3 tail pairs old, Inner 3 1/3 grown. Tertiaries coming in. Coverts + scapulars new. Marginal coverts old. Head + neck old. Center + lower part of back new, upper part old. Sides new. Abdomen old. Under wing coverts growing. Leg feathers growing.

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Berkeley. California - MVZ - UC.

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6 mi. W. Oroville co., Calif.

This bird indicates that the lower center of back is replaced 1st followed by the lower back & rump & upper part of back encroached from sides & scapular region.

♂ ad. 476 Otocoris alpestris rubea 28.5 g.
Primary no 9 + 8 old, 7 starting, 6, 5, 4, 3, 2, 1 new. Secondary 1 new, 2 3/4 grown, 3 yet a papillae, 4, 5, 6 old, 7, 8, 9 new. Tertiaries & scapulars new. Coverts above new except the outer 2 primary. alula old. Tail, outer 2 pair old & then grade up to middle. Upper coverts new & also under. Rest new except neck & part of chest.

♂ ad. 477 Otocoris alpestris rubea 28.5 g.
Primary no 9 old, 8 1/5 grown, rest new. Secondary no 1, 2, new, 3 nearly grown, 4 still a papillae, 5 & 6 old, 7, 8, 9 new. Coverts new except outer primary. Tail - middle feathers new & rest grade down to outer papillae. Rest of plumage new except neck sides

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6 mi W. Oroville, Butte Co., Calif.

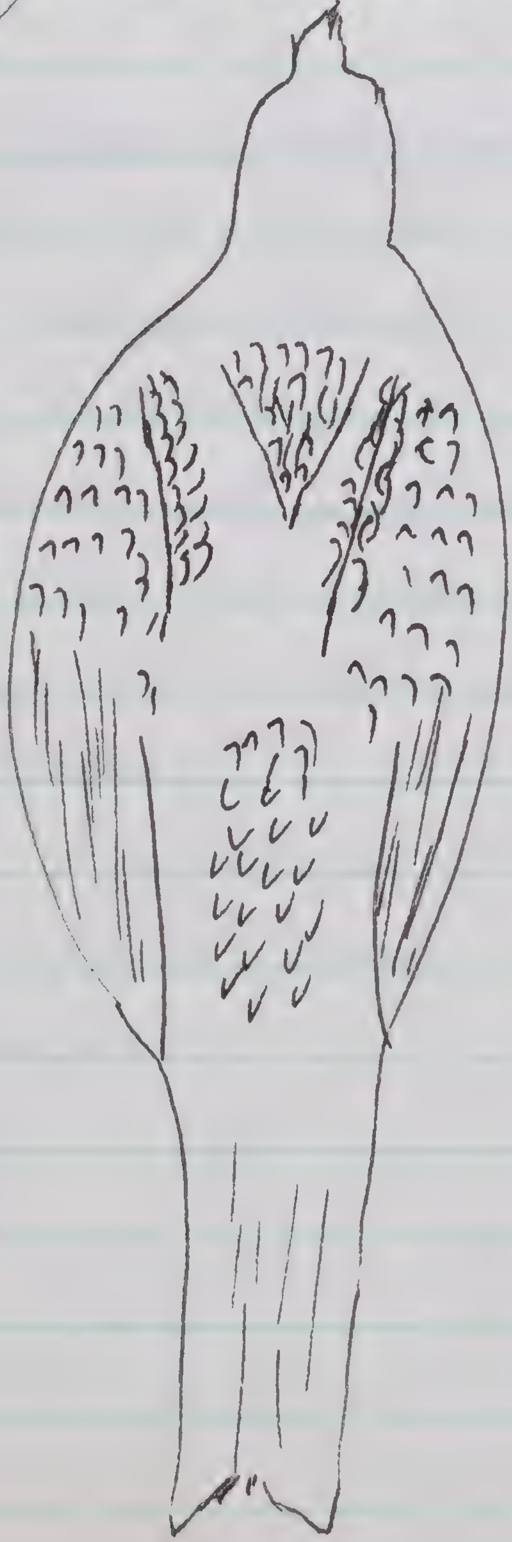
♂ ad 478 Otocoris alpestris rubea 26.7g.

Primaries 9, 8, 7 old, 6 1/2 grown, rest new.

Secondaries 1 new, 2 starting, 3, 4, 5, 6, old, 7 old, 8 & 9 new. Primary coverts new except outer 3, greater coverts new. Median old, lesser new. Tertials or tertiaries all old. Scapulars mostly new, few old left.

Tail all old - Coverts coming in new.

Around eye, cheek, ear coverts, chin new rest of head & neck old. Underparts old but sides along lateral tract new. Back unusual.



Blank spaces old feathers
"" " new "

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6 mi W. Oroville, Butte Co., Calif.

♀ ad. 479 Otocoris alpestris rubea 26.4 g.
Primary No 9 - old, 8 1/3 grown, 7 + all rest new. Secondary Nos. 1 2 + 3 new, 4 still ensheathed, 5 + 6 old. 7, 8, 9 new. Tail coverts etc as usual graded. Body + head molt complete

♀ ad. 480 Otocoris alpestris rubea 27.5 g
Molt complete - last wing feathers to be molted [primary No. 9 + Secondary 6] are almost full grown.

♀ ad. 481 Otocoris alpestris rubea 22.8 g
Primary nos 9, 8 old, 7 still ensheathed, rest new. Secondaries 1 + 2 new, 3 ensheathed, 4, 5, 6 old, 7 pushing out of sheath 8 + 9 new. Median coverts old, rest new.
Tail - this specimen proves the middle pair drops 1st - The new ones are pushing out of the sheath. 2 + 3 are still ensheathed, rest old. Head (except for throat cheek etc) old + neck old. Body plumage new. Tertiaries new.

Behle 1934 Berkeley, California - MVZ · UC.

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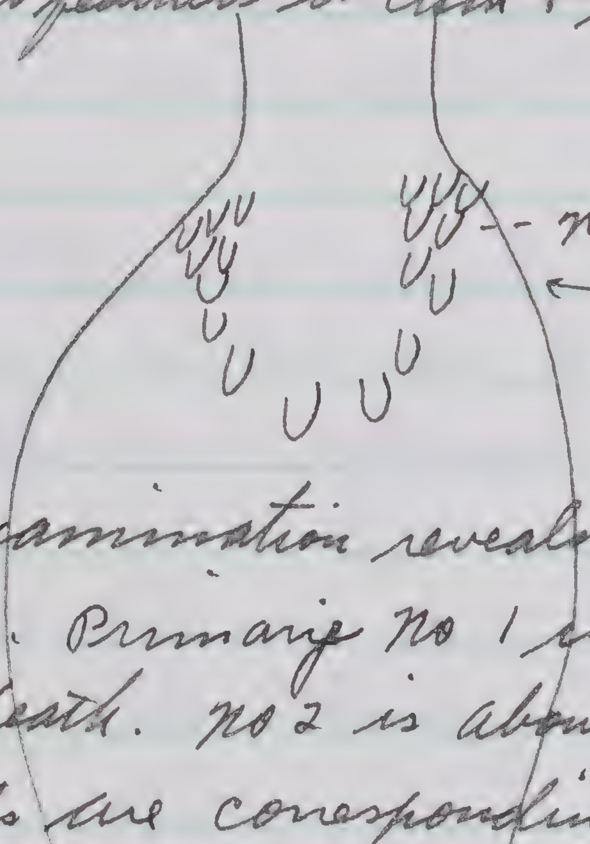
6 mi W. Oroville, Butte co. Calif:

♂ juv. 482 Otocoris alpestris rubea 26.8 grams

Important specimen to show initial stages of post juvenal molt. All juvenal plumage except on very lowest side of neck and extending down either side in an egg shaped circle till they meet in the middle of the back. So one or two tiny yellow new feathers on chin + throat.



Note: This incorrect - all body plumage old - W.H.B. april -13-1935-

Close examination reveals one or two new scapulars. Primary No 1 is just pushing out of sheath. No 2 is about 1/3 grown. The two coverts are corresponding in growth. The covert of secondary No 1 has dropped indicating that this will soon go.

♂ juv 483 Otocoris alpestris rubea 24.2 g

As above and one stage advanced. Primary Nos 1 + 2 are half grown and 3 is ready to emerge from sheath.

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6 mi. W. Oroville, Butte Co., Calif.

♀ im. 484 Otocoris alpestris rubea 26.3 g.
Primary Nos. 8 & 9 old, 7 pushing out of sheath rest new. ~~Secondary~~ No 1 new, 2 ½ grown, 3, 4, 5, 6 old, 7 old, 8 & 9 new. Tertiaries + scapulars new or mostly so. Tail like some previously recorded, 3 outers old 3 inner pairs new or rather growing. Back flanks, belly etc new. Head feathers still juvenal, few new on front. Neck + chest old. Chin new.

♀ im 485 Otocoris alpestris rubea 27.3 g.
Primary No. 9 + 8 old, 7 ½ grown, rest new.
~~Secondary~~ No. 1 half grown, 2 still in sheath, 3, 4, 5, 6 old, 7 + 8 new, 9 apparently gone and on left side looks as if is growing. If this is so it is the reverse of the ~~po~~ annual fall molt. Median coverts in molt. Inner one apparently 1st, next two, next two old, outer two as papillae. Under coverts still molting marginal coverts old. Middle rectrices starting but 2nd pair longer, 3rd pair starting, 4th a tiny papillae, 5 + 6 old. I If the second from inner pair molts 1st as this indicates it is different from the annual molt. Coverts of tail well under way but not complete. Back considerably new but some juvenal feathers still in central region. Possibly the back replacement is different in the two molts. Head + neck old

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6 mi. W. Oroville, Butte Co., Calif.

♀ im. 486 Otocoris alpestris rubea 25.1 g

Primary No 9, 8 old, 7 1/3 grown, rest new. Secondary 1 new, 2 3/4 grown, 3 starting, 4, 5, 6 old. Two of the next 3 are new but I can't tell which of the three is missing. Tertiaries look new. About in same stage as previous specimen

♀ im. 487 Otocoris alpestris rubea 28.2 g

Same stage as previous two but the 7th secondary is coming in and 8 + 9 are new so it seems the order of replacement is the same as in adults.

♀? im 488 Otocoris alpestris rubea 24.2 g.

Primary nos. 9, 8, 7, old, 6 dropped, 5, pushed out, 4 half grown, 3, 2, 1 new. 1st secondary still ensheathed, rest old except No 9 which is pushing out. Under coverts new where primaries new. Primary coverts new where "
" . Greater coverts well advanced, more so than lessers. All rest of plumage old.

The juvenal plumage of this race is certainly darker than other races

Sheaths noticeable in lower center of the back + along upper sides.

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♀ad. 489 Otocoris alpestris rubea 27.4 g.
Primary 1+2 old, 3 1/3 grown, rest new. Secondary 1+2 new, 3 dropped, no papillae as yet, 4,5,6 old, 7,8,9 new. Alula old. Last median covert being replaced. Outer rectrice old, rest in usual stages. Body plumage new. Rest about as usual - few on neck old.

♂ im. 490 Otocoris alpestris rubea 32.4 g.
Scapulars are a deeper red than ~~end tertiaries~~ lesser coverts. Already it seems that fading has occurred. Primary 9 old, 8 has dropped, 7 1/2 grown, rest new. Secondaries 1+2 new, 3 1/2 grown, 4+5+6 old, 7 just discernable as papillae, 8+9 new. Tail - outer rectrice old, rest graded accordingly. Rest of body complete but head + neck mostly old

♂ im. 491 Otocoris alpestris rubea 28.3 g.
Primary Nos 8+9 old, 7 half way. rest new. Secondaries: 1+2 new, 3 3/4 grown, 4,5,6 old, 7 almost full grown, 8+9 new. Tail - outer feather old, rest graded as usual with 5th from center pair just in papillae. Body complete, head + neck still juvenal feathers.

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♀ad. 492 Otocoris alpestris rubea 27.8 g
Primary no. 9, 8 old. 7 still ensheathed, rest new. Secondary 1 new, 2 ½ grown, 3, 4, 5, 6 old, 7 coming in, 8 + 9 new. The tertiaries certainly seem worn and old. check this. Tail, outer two old, 3rd fallen, rest various stages. Little above center of back old, rest new.

♂ im 493 Otocoris alpestris rubea 27.8 g.
Primary 9 old, 8 starting, rest new. Secondary 1, 2, ~~3~~ new, 3 starting, 4, 5, 6 new. 7 still ensheathed, 8 + 9 new. Here also the tertiaries appear old. Tail: outer feather old, rest graded on up to 3/4 grown center pair Body + back new. Head + neck old.

♀ im 494 Otocoris alpestris rubea 27.7
Primary 9 old, 8 a papillae, 7 3/4 grown rest new. Secondary 1 + 2 new; 3, 1/3 grown, 4, 5, 6 old, 7 coming in, 8 + 9 new. Tertiaries old. Tail as above. also body + head.

495 Otocoris alpestris rubea 26.9 g.
Primary 9, 8 old, 7 ensheathed, rest are new. Secondary 1 new, 2 nearly full grown, 3 dropped but no papilla yet, 4, 5, 6 old, 7 old, 8 + 9 new. Tertiaries old. Coverts new except medians

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6 mi W. Oroville, Butte Co., Calif:

which are in molt. Tail, outer 3 old, rest new. This specimen as one previously drawn shows well the feather replacement of back

♀? im 496 *Otocoris alpestris rubea* 26.4
Juvenal. Primary 9, 8, 7 old, 6 1/3 grown, 5, 4, 3, 2, 1 new. Secondary No 1 is 1/2 grown, 2, 3, 4, 5, 6 old, 7 old, 8 starting, 9 new. Tertials old + scapulars old. Rest can be seen from study skin.

♂ im. 497 *Otocoris alpestris rubea* 31.5 g.
Primary 9, 8 old, 7 coming in, all rest new. Secondary. No 1 new, 2 nearly full grown, 3 starting, 4, 5, 6, old, 7 1/2 grown, 8 + 9 new.

♂ im 498 *Otocoris alpestris rubea* 33.7 g.
Once again conclusive evidence of the complete post juvenal molt. Primary No 9 a papillae, 8 4/5 grown, rest new. Secondary Nos 1, 2, 3 new. 4 pushing out of sheath, 5, 6 old, 7, 8, 9 new. The tertiaries new. Outer tail feather unfurling from sheath. Few head + neck feather areas old or molting.

This is the 1st bird I have come across with molt nearly complete yet showing immature skulls,

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6 mi W. Oroville, Butte Co., Calif.

♀ad. 499 Otocoris alpestris rubea 26.0g.

Primaries 9 and 8 old, 7 is about 5/8 the grown, all rest new. Secondaries 1 + 2 new. 3 is 3/4 grown, 4 5 + 6 old. 7, 8, 9 new. The Tertiaries are new but ~~one~~ or more coverts are old. Outer tail feather old. Body plumage new. Parts of head and neck old

♂juv. 500 Otocoris alpestris rubea 31.8g.

Primaries 8+9 old, 7 about 1/2 grown, rest new. Secondaries 1+2 new, 3 about 3/4 grown, 4 is yet in papillary stage, 5+6 old, 7 half grown, 8+9 are old. Tertiaries molting it seems from outside toward the body. Outer tail feathers dropped, others in graded stages. Body plumage new. Head and neck feathers being replaced indicating a juvenal undergoing 1st fall molt

♂im. 501 Otocoris alpestris rubea 29.0g

Juvenal - Primaries 8+9 old, 7 commencing, rest new. Secondary 1 almost full grown, 2 half grown 3 in right wing appears ~~as~~ a 1/4" long papillae but ~~is~~ absent in the other wing. Tertiaries seem molting.

Behle 1934. 6 mi. W. Oroville, Butte Co. Calif.

Aug. 6

♀im 502 Otocoris alpestris rubea 27.7g.
♀ 503 " " " Skeleton 26.2g
♂ 504 " " " Skeleton 29.4g
♀ 505 " " " Skeleton 29.6g

These two burrowing owls taken 6 miles East Norman, Glenn Co., same date as horned larks - Aug. 5, 1934.

♂ 506 Burrowing Owl Skeleton
♀ 507 Burrowing Owl Skeleton

Note: The "im" and "juv" and "ad" after the sex mark on all the specimens from 6 mi. W. Oroville, Butte Co., were placed there not because the skull showed their age but because the retention or presence of juvenal feathers indicated the ages. This was done to facilitate molt studies to follow and is contrary to general meaning of immature which means the skull is not completely ossified. There were no cases in these horned larks where immaturity could be told from the skull - skulls were all completely ossified.

Berkeley, California, MVZ - UC.

Aug 16

acc 4414
508 Rallus o. obsoletus
Picked up dying Aug. 14 by Mrs A. S. Allen at Dumbarton Bridge, Alameda Co.

Behle, W. H
Aug. 1934

Calif. - Oregon

Behle, W. H.
1934

Calif. and southern Oregon
Aug. 17 – 28, 1934
Spec. Nos. 511–610

Berkeley, Alameda Co., California

Aug. 17

Left Berkeley with Mrs Behle at 2:15 P.M. after I had registered for the semester. Drove without mishap to Red Bluff. A few miles out of town we stopped and for an hour I walked or drove over fields and bare areas looking and listening in likely places for Horned Larks. Not one was seen. We pulled off the road and slept on the north side of town.

Klamath Falls, Klamath Co., Oregon

Aug. 18

4:00 P.M. Just arrived and am having car greased and oil changed. We left Red Bluff about 5:30 AM and drove straight on thru to here. All along the way we kept our eyes open for Horned Larks frequently stopping and walking over to barren areas. It was disappointing to say the least not to find any because I should have liked to have collected all along the way possibly checking up on intergradation. Not until we went thru Klamath Pass did we see any. Then we spied two sitting in the shade of a fence

post near the road in a barren vegetationless area. Both of these I shot, one being a molting ♀ and the other a juvenal. At last having found some we searched the area. In the tall brush some kind of bird was occasionally seen that might have been a horned lark but I was never able to get within gunshot nor get a good look at the bird. Finally we decided to push on and not waste further time. I walked over the lake bed of the former Lower Klamath Lake. It certainly is a desolate place now.

Fort Klamath. Aug. 18-

Reached here about 6:00 P.M. again stopping all along the way looking for larks with no success. The upper Klamath Lake is a beautiful sight and seething with waterfowl. Stopped at Modoc Point and saw several pelicans (White) solitary, floating along now and then scooping up a fish. Mudhens, ducks, grebes, gulls dotted the lake as far as one could see.

August 19

Made camp two miles north of town at the base of a bluff where a creek originates in a large spring. It is a beautiful spot but oh the mosquitoes.

Fort Klamath
Aug. 19.

While eating Breakfast saw Steller Jay, Junco's, Kinglets, and Nuthatches. Started out early looking for O. a. merrilli from this supposed type locality. It looks unfavorable since most all the land is meadow and pasture with deep grass. Most of the surrounding hills are heavily forested with yellow Pine. I was told that the barracks and hospital were located where the Junction Service Station now is as you come into town on the south side. The vast meadow in front of the spot is where the troops used to drill. This like the rest of the open areas around is densely covered with grass and serves as pasture land.

About six miles north of town is a large opening with much barren

land and also areas thickly covered with brush, not sage but more like rabbit brush. In this clearing which was once the site of an old saw mill a ski jump has been erected. I covered every 50 yards of this whole area seeing nor hearing no vestige of a Horned Lark. I walked thru forest, meadow, pasture land, dried marsh land, open brush land, every type of place looking for Horned Larks. Not one did I find. One place three miles north of town I thot I saw a Horned Lark, later shot the bird and found it to be a Vesper Sparrow. They look and act like Larks and are found in this rabbit brush. The back color resembled strongly the back of the ♀ lark from Klamath Pass.

Being so close to Crater Lake we drove up there staying a short time then returning. While there we noted Sierra Junco's, Clark Nutcracker, Thicker one Audubon Warbler, Several Western Bluebirds, and a Camp Robber or Jay

Behle
1934.

Fort Klamath, Klamath Co., Oregon

Aug. 19

returned to Fort Klamath, searched more fields. We were told the only open land within horseback distance in a day was around Chiloquin on the Indian reservation so we drove out there. Here again I walked thru brush covered fields, open fields looking for Horned Larks. All the birds seen were Green tailed Towhees, Juncos, brown Finches and several Magpies.

Fort Klamath has been homesteaded and cultivated to a small extent but mostly converted to grazing since the early soldier days. There are some areas around where Horned Larks might possibly have been obtained; where they might breed. The population can not and could not have been very great in the region. Possibly if any larks bred there the post breeding season wandering has taken them elsewhere.

The type specimens as I say might have come from the immediate vicinity or they may have come from 100 miles distant. The troops undoubtedly made long excursions since one party visited Crater Lake.

Fort Klamath, Klamath Co., Oregon

Aug. 19.

Like so many type localities civilization has undoubtedly altered conditions considerably. My disappointment is keen at not being able to get some specimens from here but I feel I have made every effort.

Drove back to Klamath Falls and on to Olene. No camping places being seen we asked permission to sleep on a farmers property. made camp in the dark and once again mosquitoes ate us up.

Olene, Klamath co., Oregon

August 20.

Thought of driving down to Merrill but the farmer tells me that area is fertile and highly cultivated with little or no open country. The "Oklahoma country" southwest of Merrill is sagebrush he said. The proximity to the Lower Klamath Bird Refuge and an active game warden there made me decide against this since I have no Oregon collecting permits or hunting license. Figuring that there must be more Horned Larks in the Klamath pass region where we

August 20

shot the two, we retraced our route back into California. After searching two hours along the fields of the Klamath Pass Ranch we gave it up. The birds previously seen that we thought might have been Larks proved to be Vesper Sparrows.

Next we pushed on to Lakeview via Dairy, Bly etc. All along the way as usual we stopped and walked over to and through likely looking places. Finally about 6:00 P.M. as we were within sight of Lakeview we saw some of the long sought birds in an open space beside the road. Some were feeding, some were still remaining in the shade. I shot 15 birds in the next half hour. We then drove to town, rented a cabin at the auto camp.

August 21

Lakeview, Lake Co., Oregon.

Spent most of the day putting up the birds taken last evening. All but two juvenals were made into skins. Weights were taken last evening about two hours after the birds were killed.

August 20

♂ 523 O. a. merrilli 30.8 g.
Evidently an old ♂ in annual molt. Primaries 9, 8, 7 old, 6 still ensheathed, 5 is 1/2 grown, 4, 3, 2, 1 new but do not seem full grown. Secondary No 1 is pushing out of the sheath, 2, 3, 4, 5, 6 are old, 7 is still in the sheath, 8 & 9 are new.

♂ 520 O. a. merrilli 33.8 g.
Primary 9 and 8 old, 7 is 1/2 grown, rest are new. ~~S~~ Secondary 1 is new, 2 is almost full grown, 3 is pushing out of sheath, 4, 5 & 6 are old, 7 is 1/3 grown, 8 & 9 are new.

♂ 511 O. a. merrilli 30.4 g.
Primary No 1 still ensheathed, 2 is 1/3 grown, rest new. Secondary 1, 2, 3 new, 4 1/2 grown, 5 has dropped out, 6 is old, 7, 8, 9, new.

♂ 518 O. a. merrilli 32.9 g.
Primary 1 & 2 old, 3 1/2 grown, rest new.
Secondary 1 new, 2 3/4 grown, 3 still ensheathed 4, 5, 6 old, 7, 8, 9. new.

♀ 522 O. a merrilli 27.7 g.
Primary 9, 8, old, 7 3/4 grown, rest new, Secondary 1 new, 2 is 3/4 grown, 3 just showing the papillae, 4, 5, 6 old, 7 pushing out of sheath, 8 & 9 new.

Behle
1934.

8 mi W. Lakeview, Lake co

Oregon

Aug. 20

Tertials appear new.

♂? 525 O. a. merrilli 29.2 g
Primary 8,9 old, 7 dropped out, 6 half grown, rest new, Secondary 1 nearly full grown, 2 ensheathed, 3,4,5,6 old 7,8,9 new.

♂ 516. O. a. merrilli 31.1 g.
Primary 9, 8, old, 7 fallen 6 3/4 grown, rest new. Secondaries 1 3/4 grown, 2 yet ensheathed, rest of 1st 6 old, 7 coming out of sheath 8 & 9 new.

♀ 513. O. a. merrilli 26.5 g
Primaries 9,8,7,6 old, 5 coming out of sheath 4 3/4 grown, 3,2,1 new. Secondary 1 still in sheath, 2,3,4,5,6 old. 7 old, 8 ~~just poking out~~ of sheath, 9 nearly grown. Looks like all the Tertiaries coming in new.

♂ 517 O. a. merrilli 32.1 g.
Primary 1 old, 2 poking out of sheath, rest are new. Secondaries 1 & 2 new, 3 3/4 grown, 4,5,6, old, 7 nearly grown, 8 & 9 new.

Behle
1934.

8 mi W. Lakeview, Lake co., Oregon.
Aug. 20

♂ 515 30.0g.

9th outer primary a tiny sheathed bud, 8 is 1/3 out, rest new. Secondary 1, 2, 3 new, 4 is 1/3 out, 5 has dropped, 6 old, 7 3/4 grown, 8 & 9 new

♀ 512 33.8g.

Primary 9 & 8 old, 7 pushing out, rest new. Secondary 1 new, 2 pushing out, 3, 4, 5, 6 are old. 7 a papillae, 8 & 9 new.

♂ 521 31.6

Primary 9 & 8 old, 7 a sheath, 4 1/2 grown, rest new. Secondary 1 3/4 grown, 2 a bud, 3 4, 5, 6 old. 7 a bud, 8 & 9 new.

♂ 524, 30.0g

Primaries 9, 8, 7 old, 4 1/2 grown, rest new. Secondary 1 3/4 grown, 2 a bud, 3, 4, 5, 6 old 7 old, 8 1/2 grown, 9 new.

514

Primary 9, 8, 7, 6 old, 5 a bud, 4 1/3 grown, 3 3/4 grown, rest new. Secondaries all old except 9 which is coming in new.

519

Same as 514.

Behle
1934

8 mi West Lakeview, Lake co, Oregon

August 21

♂ 526 Otocoris alpestris merrilli 34.1g
Primary 9, 8 old, 7 coming out of sheath, rest new. Secondary 1 almost full grown. 2 coming out of sheath, 3, 4, 5, 6 old, 7, 8, 9 new. Tertials look new.

~~♂~~ ♀ 527 O. a. merrilli 27.1g
Primary 9, 8, old, 7 1/3 grown. rest new. Secondary 1 new, 2 3/4 grown, 3 still a small bud, 4, 5, 6 old, 7, 8, 9 new.
[Proved to be a ♀]

♂ 528 O. a. merrilli 33.4g.
Primary 9, 8 old, 7 coming out of sheath, rest new. Secondary 1 + 2 new, 3 coming out, 4, 5, 6 old, 7 just a bud, 8, 9, new.

♂ 529 O. a. merrilli 32.6g.
Primary 9, 8 old, 7 yet a bud, 6 3/4 grown, rest new. Secondaries: 1 new, 2 a sheathed bud, 3, 4, 5, 6 old, 7 a bud, 8 & 9 new.

♂ 530 O. a. merrilli 32.6g
Primary 9 old, 8 a tiny bud, 7 3/4 grown, rest new. Secondary 1 + 2 new, 3 pushing out of sheath, 4, 5, 6 are juvenal feathers 7 nearly grown, 8 & 9 new.

Behle
1934

8 mi W. Lakeview, Lake co., Oregon.

Aug. 21

♀ 531. O. a. merrilli 30.0g.
Remiges molting same as No. 530

♀ 532 O. a. merrilli 24.4g.
Primary 9 old, 8 a bud, rest new. Secondary 1 & 2 new, 3 ½ grown, 4 old, 5 a bud, 6 old, 7.8, 9 new. This is for the right wing. The left is normal in that the 5th is old.

♀ 533 O. a. merrilli. 30.0g
Primary 9, 8 old, 7 pushing out of sheath rest new. Secondaries 1 new, 2 sheathed, 3.4, 5, 6 old. 7 ensheathed, 8 & 9 new.

Klamath Pass, Siskiyou Co, Calif.

The following two birds taken at Klamath Pass about one mile south of the Calif-Oregon Border, Siskiyou Co., California. Were both together in shade of fence post near side of road when shot on August 18, 1934

♀ 509 Otocoris alpestris merrilli 24.8g.
Im 510 " " " 26.3g

Behle
1934-

8 mi W. Lakeview, Lake Co. Oregon.

Aug. 21.

At 6:00 P.M. I returned to the spot and succeeded in shooting eight more of the birds.

This locality is no different from countless similar areas I visited the last three days unless it be the presence of a weed that looks like Avena. This spot is near the top of a low rolling hill on the west of the valley. All around is tall dense Artemisia. The birds are found on both sides of the road. They were in flocks and feeding. The ground is extremely fine sand dusty. Everywhere around was evidence of dust bathing even among the sage clumps. Sheep had evidently grazed along. The place looked as tho it might have been cleared at some time. The birds yesterday when shot at would circle around and come back to the same vicinity or across the road. Today they were much more wary and toward the end of the shooting would fly far into the sagebrush where I couldn't find them. I guess I nearly wiped out

Aug. 27.

the flock. I found that I could get closer with gun raised than I could otherwise. If I approached within gun shot and then raised the gun, the movement would alarm them and off they would fly.

In approaching a flock the ones nearest me were often the least alarmed. Several times when ready to shoot a bird on the far side of the bunch and out of gun shot distance would fly and then every other bird would fly also. It was only necessary for one bird to fly and the rest would respond.

Often a bird seeing me approach would climb up on a cow chip or log and watch and peer my way with outstretched neck.

I fancy there is a correlation between the flocking location and the presence of weeds in sufficient numbers to suffice for feed.

Behle
1934.

Lakeview, Lake co., Oregon - to Warner Valley.

aug 22

Spent all morning putting up the birds shot the previous evening. Packed up and pulled out 2:30 P.M. driving on to Adel. This distance was roughly 45 miles thru mountainous country so no Horned Larks were seen. Arriving at Adel found the store abandoned and no gasoline pump so we turned north 20 miles to Plush. Adel consists of only 3 or four houses anyway.

Warner Valley is a God-forsaken place. Pelican Lake was dry as a bone. Crump lake had water in it of a brackish nature and no vegetation was seen. A few Western grebes and Mudhens frequented the shallow water. There is one area in the valley still affording pasture land. This is an area just south of Crump Lake where several springs break thru. The surrounding areas have grass and feed for several hundred steers and a few horses that were pastured there. It was here that four Antelope were seen walking in single file unconcernedly among the cattle. Hart Lake is also dry and they tell me all the other Warner Lakes are dry even most of Harney and Malheur lakes.

Behle
1934

Plush, Warner Valley, Lake co., Oregon.
Aug. 22

A very few ducks were seen loafing in seepage areas along the road. At Plush the most enterprising man is a Mr Morris who runs the post office, a gasoline pump and store. He also gathers wood for winter sale. He tells me that 16 years ago Plush was the biggest little town in Oregon with two saloons, two hotels etc. There were 30,000 head of cattle in the valley and also sheep. All the lakes were full. Tules margined the lake and water-fowl were abundant breeding there. Yet look at the place today. With this sort of drouth so widespread I little wonder at the decrease in ducks to the vanishing point. This and the duck sickness are in my opinion the exterminating factors, not excessive shooting now, however, I should think all shooting should be stopped.

About ten miles north of Adel I shot two Sage Thrashers. This bird, the identity of which I am not sure was quite abundant and flying around alighting in the tops of greasewood bushes. There are many blackbirds around but rather wary. I succeeded in getting one. I

shot a Jay from the auto as it perched on a fence post. Its mate got away. The fifth bird obtained was a sparrow shot down in the greasewood flats while looking for Horned Larks.

August 23rd

Camped last night in an open place near the store among the greasewood bushes. Put up the five birds obtained last evening miles north of Adel.

♀ 534 ~~Thrush~~ - Sage Thrasher 44.2g
Perched in top of greasewood bush.

♂ 535 ~~Thrush~~ Sage Thrasher 43.1g
On top of fence post when shot

♀ 536 Blackbird - Brewer 61.6g
Lined up on fence wire with flock.

♂ 537 Jay - Cyanocitta 97.2g
On fence post.

♂ 538 Sparrow - Savannah 17.1g
at base of greasewood bush

Drove north two miles. The entire valley floor is covered with grayia spinosa bushes, Sarcobatus vermiculatus bushes and Rabbit Brush (Chrysothamnus). The greasewood predominates. One sees some patches of Willows lining former streams and

Aug. 23

cottonwoods and poplars sometimes surround the far distant few ranch houses. I walked out on what seemed to be an old lake bed and found Horned Larks by the hundreds. The sun was terrific and the birds were grouped closely together in the shade of fence posts. Since this could not accomodate all, they utilized the shade of cow chips + tiny weeds. I found the beggars very wary and had I not had half loads I wouldn't have been able to obtain any. Eleven were shot. We put up the auto tent and tarp as a fly and skinned birds till 5:30. It was terrifically hot. We could not have stood it if clouds had not obscured the sun late in the afternoon. No matter how fast one skinned, the skins dried out and had to be dampened. Before going back to Plush I shot three more birds.

♀ 539	Otocoris alpestris	28.3g
♀ 540	" "	27.1g.
♀ 541	" "	27.8g.
♂ im. 542	" "	32.8g
♂ 543	" "	32.8g
♀ 544	" "	29.5g

2 mi' N. Plush, Warner Valley, Lake Co; Oregon
aug. 23

♀	545	Otocoris	alpestris	28.5g
♂	546	"	"	31.5g
♀	547	"	"	27.3g
♂	548	"	"	32.7g
♂	549	"	"	28.8g
♀?	550	"	"	28.0g
♂? [im]	551	"	"	30.1g
?	552	"	"	29.2g.

Plush, Warner Valley, aug 24th

Returned to the location 2 miles north of Plush after more Horned Larks. I was very anxious to obtain more adult males since the majority of the ones put up yesterday were ♀♀ and immature ♂♂. I shot about 16 birds and of this number but one was an adult ♂. I started to return to the car and on the way in shooting at random picked up 5 or 6 adult ♂♂ one after the other. We again pitched the tent and skinned ten more birds. I noted several Turkey Vultures and one Marsh Hawk this morning while hunting. After I had disturbed a bunch of larks they flew around and started to come to rest again in shady places. One lark landed beside a large cow chip intending

to rest in the shade but this spot was already occupied by another individual who drove off the intruder. This is the first display of animosity I have noted among Horned Larks.

For the most part when disturbed the birds would fly about then come down to the ground. I picked two off fence posts though. I have often noted a single bird fly overhead uttering the flight call note seemingly looking for companions to join. There is some feeding by these birds in the day time but very little. They seem to be more active in the evening. For the most part they seek shade and squat down. I can well imagine how they must feel the heat because with shoes on I could hardly continue because my feet got so hot from the burning sands. Sometimes 6 or 8 would be gathered in the shade of a single fence post. This gives some idea of the numbers since this fence with posts every 12 yards or so extended clear across the field two or more miles.

Behle 1934

2 mi N. Plush, Warner Valley, Lake co., Oregon

Aug. 24

Yesterday afternoon it clouded up about 4:00 P.M. This afternoon it started to do likewise. We were sitting skinning when one of those whirlwinds that come across open flats came directly on us turning everything upside down, blowing cotton and tin pans away, upsetting water on my notebook which got muddy and in general covering everything up with dirt and dust. We finished putting up a few more birds, packed the cat and I walked out to the lake flats. Met a rancher driving a steer to town to slaughter so the stage could take the meat to Lakeview. He had a cow that was about to calf. He said he came to the valley 16 years ago and all the lakes were full of water. A series of channels united the lakes and the lot drained north 40 or 50 miles. He said the area I was hunting in was covered by sloughs and marshes formed by one of these channels. All over were reeds, tules and cat tails. All sorts of birds bred there. One could not drive a horse across the area without getting mired. Yet today it is a barren desert. Tule bulbs are dried

Behle
1934

out and freshwater snail shells about, give one an idea of what once was there. Dead cattle are rotting about. The ground is soft, just what Horned Larks seem to like. Many weeds are around for food. If for nothing good, the area is now fine habitat for Horned Larks. This rancher said there were Curlews about but I observed none. He said many people used to come into the region looking for Indian Arrow heads and artifacts. He told of the abundance of ~~Buffalo~~ antelope around. When questioned about the country east of Hart Mountain he said it was even more desert than around Plush.

About 5:30 I had shot three birds paying little attention to weather conditions when I looked across the valley and saw approaching across the valley from the west a great dust cloud. It was coming on rapidly and soon obscured the car. Just before reaching me a strong wind swept on bending bushes. The larks seemed suddenly to disappear and some I know headed

2 mi N. Plush, Warner Valley, Lake co., Oregon
<u>Aug. 24.</u>

for grass patches, others for low protected pockets. Then came the dust and wind with a little rain. The air was full of dust. I could see but a few yards and found it difficult to walk against the wind. We hurried to drive away since I was afraid of rain. Decided to stay the night however when the worst died down. Put up more birds that evening.

♂	553	*Otocoris*	*alpestris*	29.4g
♂	554	"	"	31.5
♂	555	"	"	30.8
♂	556	"	"	30.0
♂	557	"	"	31.1
♂	558	"	"	31.2
♂	559	"	"	32.7
♂	560	"	"	32.1
♂?	561	"	"	33.1
♂	562	"	"	32.4
♂	563	"	"	28.3
♂	564	"	"	29.3
?	565	"	"	23.0
♂ juv.	566	"	"	30.8
♂	567	"	"	31.2g
♀	568	"	"	31.3g

2 mi N. Plush, Warner Valley, Lake Co., Oregon

Aug. 24

♀ 569	Otocoris alpestris		25.7g
♀ 570	"	"	27.9g
Im 571	"	"	28.1g
♂ 572	"	"	29.2g

[I seem to have become mixed up on my dates. The birds from Warner Valley, that is the Horned Larks marked Aug 22 on the tags were really taken on the 23rd while those marked the 23rd on their tags were really shot on the 24th. Since a day makes no difference and to correct the error would necessitate 34 tag changes I am leaving the tags as written at the time of skinning]

Behle
1934

Plush, Warner Valley, Lake Co. Oregon

Aug. 25

Cleared up during the night. Put up a few more birds this morning then drove over to a patch of willows. The willows are abundant in the valley floor along where streams used to be and where they still are I imagine in the spring. In one place in these trees nests were seen from a distance clustered close together, probably magpie nests but possibly old old heron nests. Wandering thru these willows near a farm house I found a colony of English Sparrows where horse manure was abundant, 20± crows, one Willow Downy Woodpecker, dozens of quail and Doves. I have seldom seen so many quail in one location. And doves are most abundant. Coming into the valley a couple of days ago I counted 89 on a fence. A rancher said there were frequently 100 or more near the road around his house. Several Black-billed Magpies were seen. Last evening saw one Poor-will and many swallows flying about in the evening.

About 11:00 O'clock left the valley driving to Adel, Warner Lake town and

Aug. 25

south to Fort Bidwell over the awfulest roads in the country. Just after crossing the California-Oregon line I saw some larks in the sagebrush rocky country and spent an hour to secure but one. This is the first time this trip that I have met up with them in brush. Their occurrence here is probably because they leave the flats and come up to the hillsides and rocky areas this time of year where insects are a little more abundant. Linsdale claims they do this.

Drove on a short distance to Cow Head Lake which is now dry. One place there was a spring or marsh and Horned Larks were numerous here evidently attracted by the insects. This same condition was encountered at Bryon Hot Springs. I shot several here. At each shot the flock would fly about coming back to the marsh landing on the edge. These birds I think resemble those of the Warner Valley to the north.

There is certainly a difference between adult males in fresh plumage and birds of the year in 1st fall plumage. The adult ♂♂ have so much more yellow on throat and chest.

August 26

Camped last night at a public camp Ground under U.S.F.S. supervision. This was located midway between Cedarville and Alturas. It took until 12:00 to put up the nine following birds taken at Cow Head Lake, Modoc Co., Altitude about 4740.

♂	580	Otocoris alpestris	30.0g.
♀	581	" "	26.9g
♂	582	" "	30.2g
♀	583	" "	30.2g
♂	584	" "	27.6g
♂	585	" "	28.9g.
♂	586	" "	29.8g
♂	587	" "	31.8g
♀	588	" "	25.9g

These birds off hand appear similar to those of the Warner Valley.

Packed up and drove to Alturas. The sky is clouded and threatening to rain. Also the wind is blowing quite strongly. About two miles out of town I noted a promising looking barren spot on the top and side of a slight swelling. Walked over and found four larks, shooting them all. They are awfully dark, belonging I suppose to the merrilli race or they may be sierrae

They seem to have more yellow on the throat and chest.

At a place 15 miles north of Termo I noticed a plowed field where larks might be and open pasture land adjoining. Walked down there finding hundreds of larks feeding. This was black dirt, very soft and crumbly. The birds seemed to prefer small areas where weeds were growing. Because of the depressions I wouldn't see the birds till they would fly. I eventually chased them all south into the open pasture that was sparse of vegetation yet overgrown with some grass and weeds. Here the birds gathered in a great flock of about 3 or 4 hundred individuals. They were awfully wary and would fly away at my approach, their plaintive notes filling the air. When several attempts with H10's and half loads failed, I shot at great distance into the flock twice with No. 8's each time killing or wounding 2 or 3 birds. Those winged were run down or shot with a .38 shell. Eight birds were thus secured, they being the same as those below Alturas.

Just beyond Termo two larks flew across the road and dropped to the ground

among the sagebrush. After chasing them around several flights I obtained the ♀, wounded the ♂ but lost him. This bird appears the same as the ones north.

Got a cabin at Ravendale for the night since it may rain and we are awfully tired. The service station man says there are thousands of this type of birds around in the sage brush flats. This whole valley is a hot, dry, typical sage-brush valley with a few Junipers toward the foothills.

The flock 15 miles north of Termo seemed practically all in fresh plumage. While following them around a strong wind came up. They seemed to flatten down head toward the wind and after disturbing them they would wheel around into the wind to come to a landing.

My suffering from hay fever has been nearly unbearable, in fact is so but I have found great relief in using a remedy called Estivin. This is manufactured for relief from Hay fever and is dispensed in drug stores and prescription pharmacy's.

Behle
1934-

Ravendale, Lassen Co., Calif.

aug. 26

Perhaps this information will help future readers, if any, of this manuscript.

Ravendale Aug. 27th

It rained a trifle last night and the sky is overcast this morning. A flock of a hundred ± birds, Horned Larks, were noticed on a flat back of the auto camp. Spent until noon making skins of the birds shot at Alturas, Likely and Termo. At one o'clock started out. Just away from the auto cabins I walked out over the cleared stretch that serves as an emergency landing field. The birds were abundant there but so darn wary that half loads were ineffective at such long distances. A wind was blowing and the birds in landing would wheel around, coming to rest facing into the wind. Most of this area was packed solid but where the birds are most numerous the ground was soft and here a few weeds grow. The birds seem to require soft ground. It was my experience previously at Courthouse Lake that they frequent soft ground.

Behle
1934.

Ravendale to Susanville, Lassen Co., Calif.

Aug. 27

I had been told by Dr Linsdale that it was important to collect between Termo and the Bogard Ranger Station. Maps were mostly useless for the wagon trails in this country. I inquired the way from the service station man who tried to explain the way. Somewhere I got off the right road and instead of going around the north end of Eagle Lake I came down to Horse Lake which is dry. Drove out over the old lake margins until I located a flock of larks. I followed these around two hours picking off five birds all of which proved to be ♀♀. Finally went on to what was once Merrill-ville, then over the hill where a Quarantine Station was located, thence to Susanville. We had met up with a county-run Quarantine station near the California line in Modoc County. The man there said the farmers were fighting the State Fish & Game People for possession of the Dry Cow Head Lake bedsince it was excellent farm land. The upper, middle & lower Lakes of Modoc co. are dry as dry can be.

Two miles south Alturas, Modoc Co. Calif.

Aug. 26

♂? 589	Otocoris alpestris		32.1g
♂ 590	"	"	30.8g
♂ 591	"	"	29.6g
♂ 592	"	"	30.7g

Five miles south of Sibeley, Lassen Co., Calif.

August 26

♂ 593	Otocoris alpestris		30.0g
♂ 594	"	"	32.3g
♂ 595	"	"	31.0g
♂ 596	"	"	30.8g
♂ 597	"	"	31.0g
♀ 598	"	"	28.5g
♀ 599	"	"	26.2g

Termo, Lassen Co., Calif.

August 26

♀ 600	Otocoris alpestris	29.2g

Ravendale (~~Ravenville~~), Lassen Co., Calif.

August 27

♀ 601	Otocoris alpestris		30.0g
♂ 602	"	"	34.1g
♀ 603	"	"	28.9g
♀ 604	"	"	30.6g

Behle 1934

Horse Lake, Lassen Co., California

Aug. 27

The following taken from the dry bottom of Horse Lake, Lassen Co.

♀ 605	Otocoris alpestris		24.6g
♀ 606	"	"	27.6g
♀ 607	"	"	28.3g
♂ 608	"	"	30.6g
♀ 609	"	"	28.9g

Aug. 28

Bogard Ranger Station, Lassen Co. Calif.

Left Susanville this A.M. at 8:30 driving along the main highway to Westwood. Just before reaching this locality, stopped at the Coppervale Ranger Station to inquire about roads etc. Mr Wood, one of the Rangers at Bogard was there. He said that for the past several days they had been troubled with many lightening fires. Drove on to Grey's Flat on which Bogard station is located. I walked out over the flats for several miles neither seeing nor hearing larks. Returned to the car and soon found a place where we could drive off the road onto the flat. Then we cruised along slowly over the barren areas. We noted two Sparrow Hawks over the flats - They always remained close together and moved from rock to rock or bush to

Aug. 28

bush ahead of the car. As one of the Hawks came to rest on an isolated sage brush bush, that is 20 yards from any other bush, up sprang a Horned Lark and flew as fast as it could high into the air all the time uttering a rapid series of call notes or flight notes that gave me the impression it was terror stricken. It flew along unpursued by the hawk for about 100 yards then darted straight down to a pile of lava rocks and out of sight. I immediately got out of the car and approached this rock pile soon seeing the lark on top a rock alert and looking about intently. It noticed me as I approached and nervously started as if to fly when at long range I shot it with a charge of No. 8's. The bird is very close to O. a. rubea but with more yellow on the abdomen and flank regions. It is well along in molt.

On the west side of this flat the soil is of a reddish hue much like around Red Bluff.

This incident occurred at 12:15 P.M. The sky was over cast and at 12:30 started

Behle
1934

Bogard Ranger Station, Head of Pine Creek, Lassen Co. Calif. 214
Aug. 28

to sprinkle lightly

♂ 610 Otocoris alpestris - Bogard Ranger Station.
No. Wt. taken. Like rubea with greater amt. of yellow on abdomen.

I searched most all of Gray's flat around Bogard Station not seeing another lark. covered all the open fields and flats in the area without success. There is a wonderful spring at Bridge creek. Drove down to Eagle Lake hoping to find open country but it was all heavy timber. The lake has diminished considerably in size but is still a large body of water. White Pelicans were seen and thousands of ducks.

It had been threatening rain and intermittently raining all day. One could spend weeks looking for larks in the fields of this country with little success unless he knows where to go. Probably the breeding birds around Bogard move out after the nesting season. Donald Mc Lean says he has seen flocks flying over toward poison lake.

Five antelope were seen at Cow Head

Bogard ranger station to Berkeley, Calif.

Aug. 28

Lake I

Finally decided to terminate this trip. Left Westwood at 5:40 and drove all night to Berkeley arriving at 2:00 AM.

Behle, W. H.
1934
Nevada

Behle, W. H
1934

Nevada - Sept. 4 - Oct. 2, 1934
Narrative
(Spec. catalog follows as it continues
through 1937)

Behle
1934.

Reno, Washoe Co., Nevada

Sept. 4, 1934.

Yesterday morning left Berkeley with Dr Linsdale in his Chevrolet. Started about 8:00 arriving here 8½ hours later without mishap. Little attention paid to birds along the way. Stopped at Star Auto Camp.

Arose at 5:00 AM after a sleepless night. Drove out on highway to Susanville. When 6 miles out of town in a NW direction a flock of Horned Larks was seen. Linsdale walked over to the west side of the road, I took the opposite side. After about 20 minutes we returned to the car for ammunition. My "catch" was 6 birds, his 2. I mention this because on the west side of the road the vegetation was higher and thicker and the birds fewer while on the lower East side the birds were abundant and little high vegetation was present. All together we secured 15 horned larks of all ages and both sexes. Adult ♂♂ if my diagnosis is correct were the fewest of those shot. Here, as with the birds at Lakeview and the Warner Valley certain of the ♂♂ have a large amount of yellow on the throat and chest while others lack this yellow almost entirely. From previously collected birds I have arrived at the conclusion that the birds

of the year, that is of the ♂ sex, lack the yellow while birds that are adult in their annual molt have the yellow present. Such is probably the case here again although upon casual examination I didn't see any as yet unmolted old feathers to prove that the yellow possessors were old males.

The skulls of all showed a double wall. One would hardly expect much age diagnosis from this character since if they nest as early as Feb. and April the young are already several months old.

The lot of these birds are practically complete as to their molt.

The first few birds I was able to shoot with 4:10's but then the birds become more wary. While feeding in flocks upon my approach some would strain their necks watching me and when one would fly as a rule they all would. On a few occasions several individuals would remain a little longer and then fly.

The characteristic notes were in evidence only when the birds were in flight.

The backs of the birds blended in

very well with the brown and dry vegetation but the snow white breasts showed up plainly.

The birds were shot about 7:00 AM, the sun was getting hot. The birds were actively foraging. The place where they were found was not barren of vegetation but this was sparse in most places + practically nothing but dried grass and a few weeds. Seeds were evidently abundant.

In appearance I think they resemble rather closely birds from Warner Valley and the Modoc Lake chain region.

This area had two gulleys with fairly level bottoms and long gently sloping sides. When first seen they were feeding on the slopes, later when disturbed they flew most anywhere and commenced foraging.

We drove on to the California border then proceeded up a neighboring draw where Junipers grew on the sides. I took the East-facing slope. Climbed about 500 feet to the top. Saw no birds - Finally shot a Pinon Jay. It was flying along with another and

Sept. 4

alighted near me in a juniper tree. A Swainson Hawk seen soaring in the distance. Worked back and forth along the slope without seeing any birds. About 10:30 AM shot a Plain titmouse. Was making a lot of noise and flying actively about. Its mate was evidently around. I heard it but never saw it. Jack rabbits and cottontails seemed very abundant high on the slopes where they were apparently resting in the shade of the Junipers. Many coyote turds were seen all old but all containing broken bones of small rodents.

Returned to Reno, had lunch there, skinned birds in the afternoon and evening. Dr Linsdale had better luck on the opposite slope obtaining two Spotted Towhees and several Titmouses. It is possible the birds frequent this slope more. I suspect the steeper + rocky slope I was on caused me to scare the birds away.

Sept. 5.

Drove on to Winnemucca then out to Pleasant Valley and finally on to the Santa Rosa Mountains to the north. On

the way met the ranger, Mr Travis. Established camp at the Martin Creek Ranger Station. This is located about 17 1/2 miles by road from Pleasant Valley and 1 1/2 miles down on the N side of the summit. Altitude 7000? The country around is mostly covered with sage brush on the slopes but down in the bottoms of the canyons grow aspens, cottonwoods and willows. There are a few scattered groves of mt. Mahogany trees near the tops of ridges. The aspens on some slopes, together with some manzanita form a sort of chaparral.

Sept. 6-, 1934

Worked north from camp. Most birds found in the dense aspens and willows in the bottom of the canyons. Vesper Sparrows frequent sagebrush areas. In addition to birds shot, saw Western Robin, Red-shafted Flicker.

Sept 7-1934.

Again worked upstream. There is little water but many seepage areas. Saw a Cooper Hawk or Sharp-shinned

Martin Cr. R.S., 7000 ft., Santa Rosa Mts.
Humboldt Co., Nevada.
Sept. 7, 1934

Hawk flying overhead. Saw remains of a Green-tailed Towhee which doubtless furnished a meal for a hawk.

Sept. 8, 1934

Downstream today. Much same habitats. Also visited next canyon West finding same conditions minus the water. Noticed seven Flickers foraging over the surface of a rocky projection. Were very actively moving about as if after some insects.

Sept. 9 - 1934.

Same routine. It gets light about 5:00. Is cold until sun strikes an area. Little activity manifest in bottom of canyon until sun warms things up. Overhead today were soaring two Ravens and one Turkey Vulture. Two deer seen. Magpies numerous. There is a game refuge on the south side of the divide. In this several sage hens were seen as we drove up. Our camp is a typical public forest-service camp with piped water, tables and stoves.

Behle
1934.

Santa Rosa Mts to Jarbidge Mts.

Sept. 10 -

Drove to Winnemucca, then on to Elko. Little of interest along way. Only a few scattered Horned Larks seen and no good Horned Lark country, rather dense sage and greasewood everywhere. Proceeded on to Deeth, then north 30 ± miles to Charleston. Just beyond Charleston in a low flat area with swampy or wet patches in the barnyard, flocks of Horned Larks were seen. We didn't stop but this proves the attraction of wet areas for Horned Larks undoubtedly because of the food thereby offered in the form of insects on the mud or in cracks. A ~~Sharp-shinned~~ Hawk killed about ~~two~~ 15 miles ~~beyond~~ below Charleston. We thought it might be a Pigeon Hawk.

A Magpie and a Raven side by side in the middle of the road eating from a rabbit carcas

Behle
1934.

Bear Cr., 8000 ft., Jarbidge Mts.,
Elko Co., Nevada

Sept. 11, 1934

Our camp is located about 3 miles this side [South] of Jarbidge, 6 by road. Are utilizing an abandoned cabin probably the former site of a saw mill, where a small side canyon comes in from the south and joins Bear creek. This is all part of the Jarbidge water shed and no grazing is allowed here altho sheep and cattle are found on the other side of the divide. A bench mark has recently been placed on the divide but no altitude is yet stamped. We are told the divide is 8100 which checks fairly close with barometer readings. We are about 1/2 mile down on the Jarbidge side of the divide.

Prospectors have been all over the area judging by their holes. A few good sized mines are observable in the Jarbidge direction. The hills are covered with a good stand of conifers consisting of Pinus flexilis and Abies concolor There is probably some Blue Spruce scattered. The timber is by no means continuous, but scattered and discontinuous in occurrence. The stand in the canyon back of camp is as thick as any noted in the country. Certain areas of the hills were open and covered with stunted sage brush.

Along the main canyon are open grass

Bear Cr., 8000 ft., Jarbidge Mts.,
Elko Co., Nevada.

Sept. 11, 1934

areas surrounding the winding stream. One other habitat is pure stands of stunted aspens.

Early this AM went up to the head of the canyon back of camp. There is one seepage area and spring with some grass. Evidently it serves as a water hole for deer as their trails lead down here. There is one 30 X 30 ft. patch of alder bushes. In here were seen Chickadees and some kind of warbler unidentified. One chickadee was seen to bath in a small pool of water in the heart of this patch

Chickadees and Juncos are the most abundant birds present. Each are flocking. I never saw more than six chickadees to a flock. It seems that Ruby-crowned Kinglets are often accompanying Chickadees.

Sept. 12 - 1934.

Proceeded up the head of the canyon south of camp. Audubon Warblers are flying high in the tree tops. While on the ridge several flew over southward as though in migration. One Chipping Sparrow was seen in an open area on top of a divide. The Juncos seem

Bear Cr., 8000 ft., Jarbidge Mts.,
Elko Co., Nevada.

Sept. 12, 1934

to frequent open areas and are often seen on the ground presumably feeding. A Chipping Sparrow was seen with a flock of Juncos. One ♀ Junco was at the base of a sagebrush bush and a white moth came fluttering along near the ground and hovered about the base of the bush. The Junco ran about for several seconds attempting to obtain the moth finally succeeding. On surrounding slopes one or two groves of mountain mahoganies were noted, one being visited but no birds seen there.

Sept 13, 1934.

The game warden who called in to see if we were shooting deer said there were some Pinon trees two ridges down the canyon towards Jarbidge. I went down there while Tindale followed the stream down. No Pinons were found. A Sparrow Hawk noted near the rim. The whole slopes are marked with old log drag trails. Juncos, White-crowned Sparrows and House wrens were noted in open sagebrush or barren areas at the ridge top. There were two wrens cavorting about in the bushes. Coming down I got within 40 yards of a deer. It was

Bear Cr., 8000 ft., Jarbidge Mts.,
Elko Co., Nevada.

Sept. 13, 1934

evidently resting and heard me coming and jumped up. I heard it and for about 10 minutes we both stood motionless looking at eachother thru the foilage. Yesterday I saw three deer back of camp. A Red-tailed Hawk was circling over the stream side meadow.

Sept. 14, 1934

Took in a stand of timber on the East facing slope north of camp. One Green-tailed Towhee seen and heard in an open area. A creeper and a Red-breasted ~~Sapsucker~~ Nuthatch were traveling along with some chickadees. Saw two creepers this morning but didn't get a shot at them. Several Flickers seen. Hunted till noon, driving to Wells in the afternoon.

Stoped at the place where Horned Larks were noted coming up. A small flock was feeding along the moist mud areas. Shot into a flock but failed to kill a bird. After this one shot they flew high and rapidly south and I never saw them again.

9 mi NE. Wells, 6000 ft.,
Elko co., Nevada.

Sept 15, 1934

Left Wells on the U.S. Hiway 93 toward Twin Falls. Drove about 10 miles N.E. of Wells to a thick stand of Junipers and pinons Hunted here all morning. There were lots of Chickadees around. A flock of 150+ Pinon Jays flew overhead passing out of sight but apparently soon returned and alighted near me in some pinon pines. I worked over that way seeing several in the tree tops apparently getting at the cones. Then one came flying overhead and in twos and larger groups the flock moved on calling hoarsely as they departed. In addition to the birds shot there were seen or heard, Magpies, Sparrow Hawk, Flicker, Raven, Hairy Woodpecker

Sept. 16, 1934.

Started out on same route driving to 3.5 miles from the Idaho border. The Junipers ceased soon after the place where we collected yesterday. From then on it was sage and rabbit-brush vegetation till we came to the Salmon River. There were great willow patches all along this stream. Where Shoshone creek enters the Salmon River at a

Behle
1934.

Salmon River at Shoshone Cr., 5000 ft.,
Elko Co., Nevada
Sept. 16, 1934

place known as Riverside Park we collected in this willow country. Here at last the Long-tailed Chickadees were found, Tinsdale shooting several of them. Also seen in these willows were Juncos Audubon Warblers, Chipping or Brewer Sparrows? White-crowned Sparrows, one Great Blue Heron and one Great Horned Owl, Dove.

We drove over to San Jacinto and then East about 20 miles to another stand of Junipers. Only hunted half an hour here since it was hot and no other birds were spotting. Tinsdale shot at a Great-Horned Owl and I saw a Sparrow Hawk. Returned to Wells.

Also seen at the Salmon River locality were a Sparrow Hawk, a Kingfisher, and golden Pileolated Warbler., Red-tail Hawk, Prairie Falcon

Wells to Ely to Lehman Caves.
Elko to White Pine Co
Sept. 17, 1934.

Instead of going to Wendover as originally planned we took the direct route to Ely by way of Currie. The country all the way is barren sagebrush and greasewood flats. About 9 miles N.W. Currie we came across a flock of 200 or more Horned Larks. A

Beble
1934.

Wells to Ely to Lehman Caves
Elko to White Pine Co.,
Sept. 17 - 1934.

few miles before we had seen five, chasing them around till Tinsdale got one. This larger flock was feeding alongside the road. We stopped and they worked over toward the sagebrush. They being so similarly colored as the ground we could not see them so missed an opportunity for a shot. The flock split, most of the birds still keeping to the brush. I followed one group for 1/2 mile. They landed once but I couldn't get near them. Finally they headed off over to the junipers some distance away. I returned to the absolutely bare areas and soon found a small bunch feeding out in the open. They must have been picking up seeds within the bare dirt. I approached very slowly with gun raised. The flock kept moving along. When within gunshot I fired killing two. I repeated the same procedure across the road with another group firing into the flock. This time but one fell. However another bird returned solicitously and was killed within a few feet of the other bird. After we joined the hiway from Wendover it seemed the

Wells to Ely to Lehman caves
Elko to White Pine Co.;
Sept. 17. 1934

groups of larks were more frequent. We stopped twice getting two each time. The second time I observed one individual leave the ground from amongst the flock, fly about 10 ft. above the ground, make a dash and half turn as tho catching an insect, then it returned to the ground. This is more flycatcher behavior. These birds on this well traveled hiway were less wary by far than those between Wells and Currie on a stretch where few cars travel.

Small flocks were noted along the road all the way to Ely. This race certainly appears larger in the field than others I have seen.

Finally pulled in at the Lehman caves and rented a cabin.

Lehman Creek, 8500 ft. Snake Mts.;
White Pine Co.; Nevada
Sept. 18, 1934.

We are located on the west facing slope of Wheeler Peak. Looking eastward one can see into Utah. Altitude at cave entrance is 7200 ft. Mr Neilson is the Park man in charge here on

Lehman Cr., 8500 ft., Snake mts.,
White Pine co., Nevada.
Sept. 18, 1934

temporary appointment. Does not impress me favorably. Knows little about the birds or country and talks wildly. About 3 miles up Lehman Cr. are some barracks which are the quarters of a relief project under forestry supervision. They are building a road up to the lakes five miles beyond the public camp.

Around the cave entrance and vicinity are junipers and piñon pines. Up ~~Lehman~~ Lehman Cr. you have willows and aspens along the stream side with now and then a patch of yellow pine. Up the center of the canyon and on the south-facing slope is a heavy stand of mt. mahogany extending up away beyond the public camp. On the north-facing slope is a dense stand of Yellow Pine and White Fir with some Douglas Fir and probably Engleman Spruce. There are scattered patches of aspens, especially in gulley floors. The slopes are quite rocky, entirely so above timber line.

This morning I progressed up thru the Mahoganies. Juncos were

Lehman Cr., 8500 ft., Snake Mts.,
White Pine co., Nevada.

Sept 18, 1934.

the main inhabitants there; [Two kinds] along the base of the north facing slope quite a number of birds were seen, chickadees, Juncos, Audubon Warblers in the tree tops, Kinglets. The chickadees and Kinglets were flocking together in larger flocks than seen elsewhere on this trip.

In a dense patch of aspens I heard two Crested Jays making a rumpus over something, screeching unceasingly. I worked over that way in hopes of getting a jay. Coming thru the trees I noticed a Great Horned Owl some 30 ft. high perched on a branch. Above and around the jays were calling raucously and harshly. I shot the owl, not killing it outright. It flopped about on the ground and the jays came down after it flying by within a few feet of it. I shot one and the other flew away.

In a dense patch of yellow pines a flock of chickadees came along and 4 or five Nuthatches, all Red-breasted or possibly a Pygmy since Linsdale obtained two. These were making a bedlam with

Lehman cr., 8500 ft., Snake mts.
White Pine Co., Nevada
Sept. 18, 1934.

their yah-yah-yahs all of different tones.
A Hermit warbler was taken in this dense patch just as the chickadees and nuthatches came along but probably was not traveling with them. A Hermit Thrush taken here.

Sept. 19, 1934

Remained in camp all day skinning the birds shot yesterday. Linsdale went over to Baker Creek. The Horned Owl had eaten a skunk evidently because it smelled to high heaven especially about the legs and tail.
Most of the specimens collected yesterday were taken around 8500 ft. The coniferous timber begins about here on the canyon floor.

Baker Cr., 9000 ft., Snake mts.,
White Pine Co., Nevada.
Sept. 20, 1934

Drove over to this creek which is the next one south of Lehman Cr. The road goes up about 4 miles and trails continue up the forks. General layout much the same as Lehman Cr. possibly

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1934

Baker Cr., 9000 ft., Snake Mts.,
White Pine Co., Nevada

Sept. 20, 1934.

the canyon floor is wider. At the head of the canyon, conifers and aspens occur on all sides but lower down mahoganies are found on the south facing slope and stands of Yellow Pine, Limber Pine, Douglas Fir and White Firs on the north facing slope.

I worked all day in the heavy conifers. In addition to the birds shot, two Clark's Nutcrackers were seen, a golden-crown Sparrow heard, ruby-crowned Kinglets, Red-breasted and Pygmy Nut-hatches + Hairy Woodpeckers seen.

I shot a Clark Nutcracker on top a tree, the body lodging in some tall branches. Efforts to dislodge it failing I again shot it nearly blowing it to pieces so that it was not saved. The point here, however, is that the crop and throat to the very aperature were filled with pine nuts, uncracked, they looked like Pinon pine nuts. I don't see how another one could have been jammed in. The second bird accompanying the one shot circled around for several minutes calling and when

Baker Cr., 9000 ft., Snake Mts.,
White Pine Co., Nevada
Sept. 20, 1934.

last seen had landed in a tree top nearby.

Of the three Hermit Thrushes shot the two adult ♂♂ had little or no fat while the immature was awfully fat and greasy. The bird of the year weighed a couple of grams more.

There are dozens of people camped around the vicinity occupying their days gathering Piñon Pine nuts. One fellow said he and his partner had gotten 95 lbs that day and that they were worth $25.

Sept. 21, 1934

Drove up Baker Cr., this morning and worked up a side canyon later crossing a ridge down to the Shoshone trail. Windy all morning and poor collecting. nothing different seen except sapsucker. Usual flocks of chickadees + red-breasted nuthatches. Junco's found along streams and willows. Both the red-breasted sapsucker I shot and the one Linsdale got were in willows.

Lehman Cr., 7500 ft., Snake Mts.,
White Pine Co., Nevada
Sept. 22, 1934.

Started up the ravine leading SW from

Lehman Cr., 7500 ft., Snake Mts.,
White Pine Co., Nevada.
Sept. 22, 1934.

the cabins and worked up into the junipers and Pinons. Here were seen in half an hour Mountain Bluebird (3), ~~California~~ Woodhouse Jay (2), Red-shafted Flicker (4), Pinon Jays flying over (7), chickadees in one flock (6). Climbed to the ridge and dropped down into next ravine which is the one south of Lehman Cr., about the mouth of the latter. There was a tiny stream in the bottom of this canyon and willows and aspens lining the stream. As I descended there were ten (10) deer left the aspens and started up the other canyon slope. They started in two groups, single file, coming together later on. A 11th straggler was evidently crippled and could scarcely run.

No birds noted in aspens but half a mile up the canyon where the stream originated were scattered patches of willows. Here the mornings hunting was done. In addition to the birds secured there were seen many Junco's and chickadees, two Ravens, two Robins, two Flickers and two Clarks Nutcrackers. One other Fox Sparrow and one other Towhee were shot but not recovered. One Solitaire was shot in flight with two Robins which

Beble
1934.

Lehman Cr., 7500 ft., Snake Mts.,
White Pine Co., Nevada.
Sept. 22, 1934.

flew from the surface of a large granite outcropping.

I have called this locality Lehman Cr., 7500 ft, because the creek has no name and the habitat country is practically the same.

Baker Cr., 9500 ft., Snake Mts.,
White Pine Co., Nevada.
Sept. 23, 1934.

Worked all morning in coniferous forest on the south facing slope. Pinus flexilis, Pseudotsuga taxifolia, Abies concolor, Populus tremuloides were the trees in this area with some Mt. mahogany and Arctostaphylos. Cold and windy with clouds pouring over from the west. Usual setup of Chickadees, Juncos, red-breasted Nuthatches. Many woodpecker holes noted along the way.

Lehman Cave to Caliente
White Pine to Lincoln Co., Nevada.
Sept. 24, 1934.

Drizzled most of the night and ceiling low. Went to town of Baker. Mr Kaufman, the garage man seems to run the country. Is a K.S.C. graduate. He complained about

Lehman Cr to Caliente - White Pine Co.,
Spring Valley, 17 mi N. Geyser.
Sept 24, 1934

the U.S. Bureau of Entomology agents scattering poisoned grain to kill grasshoppers, the result being the poisoning of all sage hens, pheasants etc. in the country. also went into a tirade against sheep and sheep men running the country. From Baker for 30 miles or so there was driving snow, collecting on the windshield. Also a cold wind.

Noted few Sage sparrows and Vesper sparrows fly from the side of the road. Horned Larks were quite numerous and apparently little affected by weather conditions. One flock of some 400 ± birds were feeding alongside the road, the members of the flock actively moving about. Shot 16 from this lot. at each outburst of gunfire they would rise in flight and come down again beside the road some 75 or 100 yards away. They seemed to frequent the cleared area on either side of the road for 25 yards or so. Some individuals were actually foraging on the road bed.

Threatening rain all day finally raining a little in the evening.

These larks are practically thru with their molt. I can see no old feathers

Mt. Irish, 7000 ft.; Lincoln co.; Nev.

Sept. 25, 1934.

but the outer tail feathers are not completely grown out.

Sept. 25, 1934.

Drove to Hiko there making inquiry as to conditions up the mountain. Made the summit all right after unloading and pushing a hundred yards near the top. went down about a mile to Springer Spring. I think Russell camped here a few years ago. This is the only water on the mountain.

Hunted around camp for an hour before lunch. During that time saw chickadees, Bush-Tits and Woodhouse Jay. Shot one Green-tailed Towhee and a Bewick Wren. around the water tank were three or four Townsend Solitaires, countless Piñon Jays and dozens of White-crowned Sparrows of all ages. Spotted Towhees were heard in the surrounding bushes. one Kinglet was noted.

In the afternoon while Linsdale put up the birds I went on a hike to locate the timber reported to be on the opposite of the ridge known as Irish Mt. In climbing up the slope a Sharp-shinned Hawk was shot.

Belle
1934.

Springer Spring, 7000 ft., Irish mt.,
Lincoln co., Nevada
Sept. 25, 1934.

Upon reaching the top of the ridge some Yellow Pines were sighted but a mile further south. Dropped down to the bottom of the canyon west of our camp. Numerous prospect holes and shafts around. On the canyon floor saw a flock of 12+ Bush-tits and shot a pair of Vermivora celata orestera. Proceeded south and east. The canyon heads in a low saddle between the northernmost and middle peak. It is just west of the middle peak that the best stand of Yellow Pines occur. Here are also some White Firs. These conifers cover 3 or 4 miles but individual trees are scattered scarcely 50 yards apart. In an open shallow canyon I believe called Pine Canyon where a saw mill was once located I observed 2 Townsend Solitaires, 2 red-shafted Flickers, 1 White-crowned Sparrow, 1 Ruby-crowned Kinglet, 1 House Wren and 1 Rock Wren. Near the saddle previously mentioned two White-breasted Nuthatches were shot from a yellow Pine and a Sparrow Hawk was taken flying overhead. Altitude was 8200 at the western base of the center peak.

Behle
1934

Springer Spring, 7000 ft.; Mt. Irish
Lincoln Co.; Nevada.
Sept. 26, 1934.

This AM there was half an inch of ice in the water pail. It soon warmed up when the sun came over the hill. Both Linsdale and I went over to the campers. Shot one Junco and a Chipping Sparrow in the Pinons and Junipers. Saw and heard Chickadee's but didn't obtain any. Thought once that I heard a Nuthatch but didn't see the bird. Was cold and a little breezy.

In the afternoon proceeded down the road two miles and worked thru a dense stand of pinons and junipers while Linsdale skinned birds in the car. Shot one Woodhouse Jay. 1 Titmouse. 2 Spotted Towhees and 1 Ringlets. Just the one Titmouse was seen altho there were several Jays and many Towhees seen and heard.

Sept. 27, 1934.

Returned down the canyon to the dense Pinons and Junipers hunting for Titmouses. Saw a pair but only obtained one. Saw a Sharp-shinned Hawk and a White-throated Swift. There seemed to be a continual movement of Pinon Jays back and forth to the water hole. About 10:30 I walked up the canyon to the divide where just before noon

Springer Spring, 7000 ft, Mt. Irish
Lincoln Co., Nevada
Sept. 27, 1934.

I obtained a pair of Titmouses.

After lunch I shot an Audubon Warbler. This was a young ♂ and it spent several seconds chasing a large white moth around in the air. I don't think it obtained its intended prey. Shot one more Spotted Towhee and a pair of Chickadees. These latter birds seemed to sound close yet would be half a block away. For three hours I hunted the Pinons and Junipers around the divide and down the next two canyons not seeing a single bird to shoot.

The birds most noticeably attracted by the water are Pinon Jays in great flocks of a hundred to two hundred; Townsend Solitaires - 2 or 3 usually being seen around the tank; White-crowned Sparrows - very abundant in the tank region. A flock of Western Bluebirds that flew into camp one afternoon may have been attracted.

Sept. 28, 1934

Left the spring at 6:00 A.M. headed for Las Vegas. Called in at the Thiriot Ranch out of Alamo. The boys haven't done any mounting

Beble
1934-

Thiriot Ranch near Hiko
Pahranagat Valley. Lincoln Co., Nev.
Sept. 28, 1934.

for 3 or 4 years. We saw what they had which consisted of a Wood Ibis (said to have been common around the last summer); a Great Blue Heron, (few being seen) a weasel, meadow lark and several ducks, a couple of owls and Hawks, nothing unusual. The man at the ranch said 15 or 16 Sandhill cranes were around the pasture the previous evening and that that was a sign of cold weather - that other years their arrival and cackling signaled the approach of cold weather. He said that coyote traps had ceased to yield skunks the last few days since it had turned cold. The boys hadn't been able to obtain a coon for E. R. Hall as requested in a letter. Carp were reported to have destroyed most of the tules in surrounding sloughs thus making little food for the ducks which were forced to use the ponds only as resting places, soon moving on

I shot five Horned Larks just out of Hiko. They were feeding in an open area near the road. When one was shot the others would fly but a short

Elko to Las Vegas, Nevada.

Sept. 28, 1934.

distance so I got the entire flock. Several other small flocks were seen in the valley.

Two White Herons, Mudhens, Avocets and Yellow-legs were noted as we drove past sloughs and one large bank of ducks.

Las Vegas to Fallon

Sept. 29, 1934.

Left Las Vegas at 5:00 AM arriving at Fallon at 7:00 P.M. No Horned Larks observed along the road until we reached a stretch 14 miles N of Beatty where a single ♀ was taken.

About a mile N of Beatty a Lewis Woodpecker was observed flying along parallel to the road evidently intending to land on a Telephone pole. It finally did alight on one but was immediately harrassed by a Shrike which drove it away to the next pole. Here I shot the bird since the MVZ had none from Nevada.

A second Lewis Woodpecker was seen about five miles N of Beatty. The only others observed were one at Elko and Linsdale saw + shot at one at Springer Spring on Mt. Irish.

Behle
1934

Las Vegas to Fallon

Sept. 29, 1934.

No more Horned Larks were seen until we reached 17 mi w of Tonopah. Here along the south side of the road were three pools of rain water that hadn't dried up yet and on the muddy edges were Horned Larks presumably feeding on insects on the mud. When shot at the remaining birds would fly far out into the desert waste land possibly alighting in the shade of bushes but usually after a long interval they would be attracted back to the water so we were able to pick off several.

Finally around Schurz at dusk both N & S of town we came across flocks and shot several. These seemed to be feeding in the cleared strip on either side of the road.

As we passed Walker Lake there were thousands of Mudhens, ducks, a few loons and gulls noted.

10 mi South of Fallon, 4000 ft.

Churchill Co., Nevada

Sept. 30, 1934.

Stayed at Fallon putting up Horned Larks all evening. At 6:00 P.M. drove south 10 miles looking for Horned Larks. These we found in great abundance south of the last ranch house

Fallon to Reno Nevada.
Sept. 30, 1934.

and out on the old lake bed I imagine of Carson Lake. It was great open flat country not entirely barren and here were hundreds aggregated feeding but spread out and scattered in fives, tens etc. They were also present in rabbit-brush covered fields and many were feeding along the wet banks of a nearly dry drainage ditch. Twenty birds were obtained here. They appear as near as I can remember to resemble the Warner Valley birds. The clay-alkaline soil is the same both places.

Drove to Carson City then Reno, no larks seen or heard along the way. Only one Flad. picked up in the road 27 mi W Fallon.

Galena Cr., 7500 ft.
Washoe Co., Nevada
Oct 1, 1934

Drove out here from Reno this A.M. About 20 miles out on the Lake Tahoe road. Mostly Pinus ponderosa jeffreyi with some White Fir and aspens, willows etc along the creek. In addition to birds shot were seen White-breasted Nuthatch, Red-breasted Nuthatch, Red-shafted Flicker, Crested Jay, Red tail Hawk, White-crown Sparrow.

Zeliele
1934

Reno, Nevada to Berkeley, Calif.

Oct 2, 1934 -

This field trip terminated today - Drove to Berkeley and the MVZ without stopping

Behle, W. H.
1934 - 1937

Catalog of Specimens
#611 - #1156

Catalog Section starting with the Nevada Trip. Pages numbered separately.

William H. Behle

Specimens - #611 - #1156
Sept. 4, 1934 - June 4, 1937

Behle
1934.

6 mi N.W. Reno, Alt. 5500 ft. Washoe Co. Nevada (1-

Sept. 4, 1934

611	Otocoris alpestris	♀ ad	26.5g
612	" "	♂ ad	32.0g
613	" "	♂ ad	29.1g
614	" "	♂ ad	29.5g
615	" "	♀ ad	25.5g
616	" "	♂ ad	29.5g
617	" "	♀ ad	26.5g
618	" "	♂ ad.	30.4g
619	Baeolophus inornatus	♂ ad	15.1g
620	Cyanocephalus cyanocephalus	♂ ad	93.5g

Sept. 5

Mill City, Pershing Co, Nevada

621	Otocoris alpestris	♀ ad	no. wt.

Sept. 6

Martin Creek Ranger Station, 7000 ft, Santa Rosa Mts. Humboldt Co, Nevada.

622	Carpodacus cassinii	♂ ad.	27.5g
623	Pooecetes gramineus	♂ im	23.5g
624	" "	♀? im	20.0g
625	Vireo solitarius cassinii	♀	14.5g
626	Empidonax hammondii	sex?	10.0g
627	Western Tanager	♂ im	32.5g
628	Oberholseria chlorura	♂ ad	35.5g
629	" "	♂ im	29.5g
630	Brewer Blackbird	♂ ad	59.5
631	" "	♂ im	64.5
632	" "	♀ "	52.5

Behle 1934- Martin Creek Ranger Station, 7000 ft., Santa Rosa Mts., Humboldt Co., Nevada (2

Sept. 7-

633	Hermit Thrush	♀ im	20.9g
634	" "	♂? "	27.9g
635	Ruby-crowned Kinglet	♂ ad	6.5g
636	Western Flycatcher	♀?	13.5g
637	Hammond "	♀ ad	11.0g
638	White-crowned Sparrow	♂ ad.	28.9g
639	Brewer Sparrow	♂ im	10.7g
640	Song Sparrow	♀ im	22.5g
641	White-crowned Sparrow	♀ im	23.5g
642	Chickadee	♀ im	10.0g
643	"	♀ im	11.5g
644	"	♂ im	11.0g
645	"	♀? im	10.5g
646	"	♂ ad	10.0g
647	"	♀ ad	10.5g

Sept. 8

648	Vermivora celata	♀ im	9.5g
649	Ruby-crowned Kinglet	sex? ♂? im	6.2g
650	" "	♀? "	6.3g
651	Bunting	♀	11.7g
652	Fox Sparrow	♀ ad	31.5g
653	Spotted Towhee	♀ ad	31.1g
654	Green-tailed Towhee	♀ ad	28.7g

Sept. 9.

655	Chipping Sparrow	♂ ad.	12.5g
656	" "	♂ ad	12.5g
657	Wright Flycatcher	♂ im	11.0g
658	Vermivora celata	♂ ad	9.5g

Martin Cr. R. S. 7000 ft. Santa Rosa Mts., Humboldt Co., Nevada.
Sept. 9. 1934

659	Goldfinch	♀ ad.	11.4 g
660	Audubon Warbler	♂ ad.	12.5 g
661	Junco	♀ im.	18.5 g
662	"	♂ im.	16.5 g
663	Chickadee	♀ ad	9.5 g

Sept 10 -

664	Cooper Hawk	♀ ad	no. wt taken

Taken about 15 miles S of Charleston, some 15 miles N of Deeth, Elko Co. Nev.

Sept 11 -

Bear Creek, 8000 ft. Jarbidge Mts. Elko Co., Nevada

665	Junco	♂ im.	17.5 g.
666	Ruby-crowned Kinglet	♂ ad.	7.3 g.
667	Audubon Warbler	♀ im.	11.2 g.
668	Red-breasted Nuthatch	♂ im.	10.8 g.
669	Hammond Flycatcher	♂ ad.	9.8 g.
670	Chickadee	♂ ad.	11.7 g.
671	"	♂ ad.	11.7 g.
672	"	♂ ad.	11.4 g.
673	Clark Nutcracker	♀ ad.	120.9 g

Sept. 12

674	Junco	♀ ad.	19.2 g
675	"	♀ ad.	17.5 g
676	House wren	♀ ad.	9.7 g
678	Chipping Sparrow.	♂ im.	13.5 g

Bear Cr., 8000 ft., Jarbidge Mts.,
Elko Co., Nevada
Sept 12

679	Ruby-crowned Kinglet	♂ im.	6.5 g.
680	Hammond Flycatcher	♀ ad.	10.5 g
681	Chickadee	♀ ad	11.0 g
682	"	♀ ad.	11.1 g
683	"	♀ ad.	10.5 g
684	"	♂ im	11.4 g
685	Hairy Woodpecker	♀ ad.	66.0 g
686	Clark Nutcracker	♂ ad.	138.0 g

Sept. 13

687	Hermit Thrush	♀ im.	31.5 g
688	Creeper	♂ ad.	8.8 g
689	Chipping Sparrow ?	♀ im.	11.6 g
690	Hairy Woodpecker	♀ ad.	64.5 g
691	Grouse	♀	No. wt.
692	White-crowned Sparrow	sex ?	24.3 g
693	" " "	♀ im.	22.6 g
694	Junco	♀ ad.	21.0 g
695	"	♂ ad.	20.0 g
696	Chickadee	♂ ?	11.0 g

Sept. 14

697	Chipping Sparrow.	♂ im.	13.0 g
698	Hermit Thrush	♀ im	28.0 g
699	Western Robin	♀ ad	78.0 g
700	Hairy Woodpecker	♂ ad.	74.0 g
701	" "	♀ ad.	55.0 g

10 mi NE. Wells, 6000 ft.,
Elko co., Nevada

Sept. 15

702	Cassin Vireo	♀ ad.	14.2 g.
703	Black-throated gray Warbler	♀ ad.	8.0 g.
704	Chipping Sparrow	♂ ad.	13.0 g.
705	Chickadee	♂ ad.	11.2 g
706	Chickadee	♀ im.	10.2 g
707	Chipping Sparrow	♀ ad.	11.5 g
708	Mountain Bluebird	♀ ad	27.5 g
709	" "	♂ ad.	28.0 g

Salmon River at Shoshone Cr., 5000 ft
Elko co., Nevada
Sept. 16, 1934.

710	Audubon Warbler	♀ ad.	No. wt.

9 mi NW Currie, Elko co., Nevada.
Sept. 17, 1934.

* 711	Otocoris alpestris	♂ ad.	29.2 g
712	" "	♂ ad.	30.2 g
713	" "	♂ ad.	28.7 g
714	" "	♀ ad.	28.2 g
715	" "	♀ ad.	29.2 g

* Note: One of these birds was taken further south on the main highway to Ely but all in the same general locality.

Behle
1934.

Lehman Cr. 8500 ft. Snake Mts.,
White Pine Co., Nevada.
Sept. 18, 1934.

716	Ruby-crowned Kinglet	♀?	5.9g
717	" " "	♂?	6.0g
718	" " "	♂ ad.	5.7g
719	" " "	♂ ad.	6.0g
720	" " "	♂ ad.	5.7g
721	" " "	♂ ad.	6.5g
722	Hermit Thrush	♂ im.	23.9g
723	Ruby-crowned Kinglet	♂ ad.	5.9g
724	" " "	♂ ad.	6.1g
725	" " "	♂ ad.	5.8g
726	~~Hermit~~ Townsend Warbler?	sex?	8.5g
727	Audubon Warbler.	♀ ad.	12.7g
728	Junco	sex? ad.	14.7g
729	"	sex? ad.	17.7g
730	"	♀? im.	19.7g
731	Chickadee	sex? ad.	10.4g
732	"	♂ ad.	12.0g
733	Cyanocitta	♂ ad.	112.5g
734	Great Horned Owl	♀ ad.	no. wt.

Baker Cr., 9000 ft., Snake Mts.,
White Pine Co., Nevada.
Sept. 20, 1934

735	Chickadee	♀ ad.	11.0g.
736	Golden-crowned Kinglet	♂ ad.	5.6g.
737	Creeper	♀ im.	7.6g.

Behle
1934.

Baker Cr., 9000 ft.; Snake Mts.,
White Pine Co., Nevada
Sept. 20, 1934.

738	Chipping Sparrow.	♀ ad.	12.2 g
739	Chickadee	♀ ad.	10.5 g
740	"	♂ ad.	11.5 g
741	Hermit Thrush	♂ ad.	31.0 g
742	" "	♂ ad.	29.5 g
743	" "	♂ im.	33.0 g

Baker Cr., 8500 ft.; Snake Mts.
White Pine Co., Nevada
Sept. 21, 1934.

744	Red-breasted Sapsucker	♂ ad.	No. wt.
745	Golden-crowned Kinglet	♂ im.	5.9 g
746	Ruby-crowned Kinglet	♂ ad.	6.5 g
747	Audubon Warbler	♂ ad.	14.0 g
748	Chickadee	♀ ad.	10.2 g
749	"	♂ im.	10.7 g
750	Junco	♂ ad.	19.7 g
751	"	♀ ad.	19.7 g
752	"	♂ ad.	20.0 g

Lehman Cr., 7500 ft. Snake Mts.,
White Pine Co., Nevada
Sept. 22, 1934.

753	Golden-crowned Kinglet	♀ ad.	6.0 g
754	Tolmie Warbler	♀ ad.	10.0 g
755	Junco	♂ ad.	17.0
756	Chipping Sparrow	♀ ad.	11.7

Lehman Cr., 7500 ft., Snake Mts.
White Pine Co., Nevada.
Sept. 22, 1934.

757	Chipping Sparrow.	♀ ad.	12.0g
758	Fox Sparrow.	♀ im.	30.3g
759	Spotted Towhee	♀ im.	33.8g
760	" "	♂ ad.	40.8g
761	Townsend Solitaire	♂ im	37.3g
762	California Jay	♀ im	75.8g ~~[illegible]~~
763	Spotted Towhee	♂ im	38.8g
764	Townsend Solitaire	♀ ad.	34.5g

Baker Cr., 9500 ft., Snake Mts.,
White Pine Co., Nevada
Sept 23, 1934.

765	Creeper	sex?	7.5g
766	"	♂ ad.	7.7g
767	"	♀ ad.	7.5g
768	"	♂ im.	8.5g
769	Hermit Thrush.	♂ im.	25.0g
770	Ruby-Crowned Kinglet	♀ ad.	6.4g
771	Red-Breasted Nuthatch	♀ ad.	9.4g
772	" " "	♀ ad.	9.8g
773	Chickadee	♂ ad.	11.2g

Spring Valley, 17 mi N Geyser.
White Pine Co., Nevada.
Sept. 24, 1934

774	Otocoris alpestris	♂ ad.	30.0g
775	" "	♀ ad.	28.5g

Spring Valley, 17 mi N. Geyser
White Pine co., Nevada
Sept. 24, 1934.

776	Otocoris alpestris	♀ ad	27.0g
777	" "	♂ ad	32.3g
778	" "	♀ ad	31.5g
779	" "	♂ ad	31.6g
780	" "	♂ ad.	30.5g

14 mi NW. Beatty
Nye Co., Nevada
Sept. 29, 1934

781	Otocoris alpestris	♀ ad.	no. wt.

18 mi W. Tonopah
Esmeralda Co., Nev.
Sept. 29, 1934

782	Otocoris alpestris	♀ ad	no. wt
783	" "	♂ ad	"
784	" "	♀ ad	"

1 mi ~~N.~~ S. Schurz
Mineral Co., Nev.
Sept. 29, 1934.

785	Otocoris alpestris	♂ ad	"
786	" "	♀ ad	"

3 mi N. Schurz
Mineral co., Nev.
Sept. 29, 1934

787	Otocoris alpestris	♂ ad.	"
788	" "	♂ ad.	"
789	" "	♂ ad	"

Behle
1934

27 mi. W. Fallon
Lyon Co., Nevada
Sept. 30, 1934.

790	Otocoris alpestris	♂ ad.	no. wt.
	Picked up on road.		

10 mi S. Fallon, 4000 ft.,
Churchill Co., Nevada
Sept. 30, 1934.

791	Otocoris alpestris	♂ ad.	31.2g
792	" "	♂ ad.	31.7g
793	" "	♀ ad.	27.9g
794	" "	♂ ad.	29.5g
795	" "	♂ ad.	32.7g
796	" "	♀ ad.	27.2g
797	" "	♀ ad	27.0g
798	" "	♀ ad.	30.0g

Galena Cr., 7500 ft.,
Washoe Co., Nevada.
Oct. 1, 1934

799	Chickadee	sex? ad.	10.3g
800	Ruby-crowned Kinglet	♀ ad.	6.6g
801	Creeper	♂ im.	8.5g
802	House Wren	♀ im.	11.5g
803	Audubon Warbler	♂ ad.	12.0g
804	" "	♂	12.0g
805	Spotted Towhee	♀ im.	37.8g
806	Junco	♂ im.	18.8g
807	"	♂ ad.	19.6g
808	"	♂ im	19.8g.

Galena Cr, 7500 ft.
Washoe Co., Nevada
Oct 1, 1934.

809 Junco ♂ im 16.5 g
810 Mountain Bluebird ♀ ad. 33.0 g

Tomales Bay
Marin Co., Calif.
Nov. 3, 1934.

811 Red Phalarope. ♀ No. wt.
Brot in, one of 9 birds, by Ralph Ellis and W.B. Davis - Accession 4494

Berkeley, Alameda Co. Calif. Nov. 6, 1934.

812 Junco ♂ No. wt.
Picked up by Mrs. R.T. Orr. Acc. 4495.

1 1/2 mi. E. Moraga Junction
Contra Costa Co., Calif.
Nov. 25, 1934

813 Red-tailed Hawk ♀ acc. 4515
Picked up by O. C. Smiley. Had been eating a gopher as shown by remains on feet & in crop.

1 mi NW Santee
(Santee is 3 mi due north of El. Cajon)
San Diego Co., California
Nov. 25, 1934.

814 Otocoris alpestris actia ♂ 27.6 grams

1 mi NW. Santee
San Diego county, Calif.
Nov. 25, 1934.

815	Otocoris alpestris actia	♂	27.0g.
816	" " "	♀	24.1g
817	" " "	♀	

These four horned larks shot from a flock of approximately 30. Acc. 4516.

La Presa
San Diego co. Calif.
Nov. 26.

818	♂ Otocoris alpestris actia	♂	27.8g.
819	" " "	♂	28.5g.
820	" " "	♂	27.7g
821	" " "	♂	28.0g
822	" " "	♂	26.6g
823	" " "	♂	29.5g
824	" " "	♀	27.1g
825	" " "	♀	28.2g
826	" " "	♂	30.1g
827	" " "	♂	26.7g
828	" " "	♀	27.9g
829	" " "	♂	30.5g
830	" " "	♀	25.1g
831	" " "	♂	28.8g
832	" " "	♂	29.6g
833	" " "	♂	26.4g
834	" " "	♂	30.0g
835	" " "	♂	27.9g

La Presa
San Diego co. Calif.
Nov. 26.

836	Otocoris alpestris actia	♀	25.3 g
837	" " "	♂	28.4 g
838	" " "	♀	27.1 g
839	" " "	♀	26.0 g
840	" " "	♀	27.2 g

These 23 horned larks taken Nov. 26, and sent in thru the mail arriving at M.V.Z. on the 28th, were then weighed and put up. Carcasses saved for anatomical dissections in connection with age differences. Each carcass has a skull tag with field no. etc corresponding to study skin.

Noted the lack of yellow on these birds and the yellowish throat mostly lacking. Two specimens had cross bills. Acc. 4518

Berkeley, Alameda Co., Calif.
Dec. 11, 1934

841 Colaptes collaris — Skeleton only

Picked up near International House by Miss Olga Taylor.

842 Wren-tit — Acc. 4569 — Study skin

Picked up in Strawberry Canyon, U.C. Campus. Alameda Co., Calif., By R.A. Failing on Jan. 23, 1935.

W. H. Behle
1935.

Berkeley, Alameda Co, Calif.
Feb. 4th

843 Turdus m. propinquus ♂ acc. 4580 81.5g.
Brought in by Miss Carol Mills of Berkeley. As she was walking along this bird was pursuing another of its kind and flew directly into her leg bruising it and breaking the robins neck or at least killing it. Saved as study skin.

844 Cedar Waxwing ♂ not accessioned but saved as a skeleton for exchange. Found on sidewalk by by Mrs M. H. Edwards of 959 Ventura Street, Berkeley. Was weak and evidently suffering from an intestinal ailment.

Feb. 9th

845 Phaps chalcoptera ♂ From aviary of E. W. Gifford, Oakland. Testes ⬭ Body emaciated and weight not taken. Study Skin. acc. 4585

Feb. 16

846 ♂ Otocoris alpestris Testes ∘
847 ♀ " " Ovary ⁘

gonads show signs of activity
These two birds collected by L. M. Boyers at Truckee, Nevada Co, Calif. on Feb. 15, 1935. Shot along railroad track. Adventiciously soiled with soot. Along Truckee River. See correspondence

Behle
1935

Berkeley, Alameda Co., Calif.
Feb. 16,

under L. M. Boyers He saw 7 Horned Larks about 100 yards from the station feeding along the tracks in the open spots between the patches of snow. Two were shot out of the flock between 5:15 PM and 6:00 PM. The flock would flush and circle around and land a hundred feet away. altitude 5880 feet.

These are definitely not O. a. sierra reported from there by Oberholser. Probably O. a. lamprochroma possibly O. a. actia.

Feb. 19, 1934
acc 4591

The following birds sent in by L. M. Boyers from Truckee, Nevada Co., Calif.

848	Otocoris alpestris	♂	29.6g	Testes ∘ May 16, 1935
849	" "	♂	31.0g	Testes ∘ May 18, 1935
850	" "	♂	25.0g	Testes May 18, 1935
851	" "	♂	28.8g	May 18, 1935
852	" "	♂	31.0g	May 18, 1935
853	" "	♀	26.2g	May 18, 1935
854	" "	♀	24.1g	May 18, 1935
855	" "	♂	27.7g.	May 16, 1935
856	Junco	♂	16.5g	May 18, 1935
857	Chickadee	sex?	—	" " "
858	"	♂	—	" " "
859	"	♂	Skeleton	" " "
860	"	♀	"	" " "

all chickadees alike -

Behle
1935

Berkeley, Alameda Co. Calif.
Feb. 18, 1935

861♀ Red-Tailed Hawk in 1st year plumage - saved as skeleton for exchange purposes, not accessioned. Picked up by Joy Tesure at Sunol, near Calaveras Dam, Alameda Co., California on Feb. 18, 1935. Had been shot by local hunter and found wounded. by Miss Tesure, a Zoo 113 student

acc. 4590

862 One egg of Chaemaepelia minuta
863 One egg of Oreopelia montana
864 Two eggs of Chalcophaps indica

These eggs brought in by Mr E. W. Gifford Feb. 19, 1935 from his aviary in Oakland.

Feb. 21,
Acc 4596

865 Chickadee ♂? 7.0 grams Study skin

This bird brought in by Mr Kinsey from his aviary in Marin Co., Calif. It was trapped about three years ago and has been caged ever since. In captivity with each molt it became gradually whiter until last fall after the ~~annual~~ molt it was entirely white with the exception of part of the primaries. Then it started to regain pigmented feathers with the spring molt. Just as it was becoming interesting it died

Behle
1935

MVZ · U.C · Berkeley, Calif.
. Feb. 21, 1935 -

caged conditions with artificial light caused several partial molts per year. Its death was probably the result of an attack by a chat that accidentally got into the same cage. The bird's mate has taken on a melanistic phase. This bird died Sunday 17 th and was received at the museum Thursday. The gonads were almost entirely decomposed but both Dr Miller and I judged it was a male. There seemed to be two enlarged testes soft but outlined visibly. The weight was taken Thursday.

acc 4608

866 ♀ Spinus t. pallidus
Sent in by L. Morgan Boyers. Taken on March 3, 1935 at Truckee, Nevada Co., Calif. 11:00 AM, 5800 ft., In willows along edge of Truckee River.

acc. 4611

867 ♂ Oropopelia humilis Rec'd Mar. 12, 1935. from E. W. Gifford. Died Mar. 11, 1935 at his aviary in Oakland Skin

acc. 4612

868 ? Columbigallina minuta Rec'd Mar. 13, 1935. from E. W. Gifford. Alcoholic

Berkeley, Alameda Co, Calif.

March 15, 1935-

acc. 4613

Four birds in flesh received from L. M. Boyers

869 ♂? American Dipper Taken 5 miles (by highway) E. of Truckee, Nevada Co, California. on Truckee River, March 14, 1935; 1:30 P.M.

870 ? Sparrow - Taken at "Mystic", 18 mi. E Truckee (by highway) along Truckee River; 10AM.

871 ♂ Bluebird - Taken at Mystic; 18 mi E Truckee

872 ♂ Bluebird - " " " " " "

Both on March 14, 1935-

Testes of Bluebirds enlarged O O

Evidently starting nesting + courtship activities.

See Boyers letter to Linsdale under Date of March 15th.

March 19, 1935

acc 4615

Following birds received from L. M. Boyers, Truckee, Nevada Co, Calif.

Collected March 16th.

873 ♂ Song Sparrow - 2 mi. E. Truckee, 5800 ft., Nevada Co, Calif. Saved as skin

874 ♂ Marsh Wren - 2 mi E. Truckee. 5800 ft. Skin

875 Chickadee - 2 mi E. Truckee, " ~~Skeleton~~ not saved.

876 ♂ Burrowing Owl. 2 mi E. Truckee " Skin

877 ♂ Horned Lark - Truckee, 5800 ft - Behind station on railroad tracks. Saved as skin

878 ♀ Horned Lark - As above for locality. Skeleton

MVZ - U.C - Berkeley. Calif.
Mar. 19, 1935

879 Killdeer - Collected March 15, at Tanton's Spring, 6 mi W. Reno, 4600 ft., Washoe Co., Nevada. ~~Saved as skeleton~~ Not saved.

See letter from Boyer to Linsdale under date of March 18.

The Song Sparrow, Chickadee, Marsh Wren and Burrowing Owl were taken near a spring on the hillside above the highway where willows and grass were present but no large trees.

Horned larks were the 1st seen for 10 days or so since the last snow storm. The ♀ was black with soot and grease on the under parts.

March 20-
acc. 4616

880 ♀ Say Phoebe - Truckee, 5800 ft., Nev. Co., Calif. Mar. 19, 1935
881 ♂ Creeper " " " " "
882 ♀ Creeper " " " " "

These 3 birds shot by L. M. Boyers and sent into museum in the flesh. Gonads scarcely or not at all enlarged.

April 20-
acc. 4637

883 Sex? Lutescent Warbler - found dead in Strawberry Canyon, Berkeley, Alameda Co., Calif.

Behle
1935

Berkeley, Alameda Co., Calif.

April 22 -

Acc 4638

The following three birds received at MVZ Saturday April 20. Were shipped frozen, well wrapped in papers but were thawed out upon arrival. The birds sent from Roseau, Minn by P.O. Frykland, a Taxidermist. The Great Gray Owl was purchased for $3.50 the Marsh Hawk and Great Horned Owl were given to the M.V.Z. Data as follows.

884 ♀? Great Gray Owl Skeleton only
T. 164, N, Range 39 W. 7th Prin, Meridian, (In Roseau County, Minn.,) near Canadian boundary, Taken December 15, 1934.

885 ♀ Marsh Hawk -
Town of Dieter, Roseau County, Minn.
November 3rd, 1934.

886 ♀ Great Horned Owl, Town of Dieter, Roseau County, Minn. Feb. 9th 1935.

Behle
1935

Berkeley, Alameda Co., Calif.

acc. 4647

887 ♀ Phalacrocorax auritus auritus
888 ♂ " "
889 ♂ " "

These three cormorants collected at my request by Milton T. Rees and Charles Behle at Egg Island, Davis Co., Great Salt Lake, Utah April 19, 1935. Sent in the flesh to the museum collect.

Gular pouch deep orange; iris a bluish green. Inside mouth blue. Legs black.

May 6.

acc

890 ♀ Great Gray Owl.

Roseau Co., T 164 N R 39 W, Minnesota Sent in by P. O. Fryklund. Taken on Feb. 22, 1935.

May 13

acc 4676

891 ♂ Yellow Warbler -

Picked up May 13, at Alamo, Contra Costa Co., by Mrs A. S. Allen.

Behle
1935

Berkeley, Alameda Co., Calif.

May 17

acc. 4680

892 ♂ Russet-backed Thrush

Picked up dead in Lakeside park, Lake Merritt, Oakland on May 16 by Mr Rempel, the collector for zoology.

Personal field numbers 893 to 999 have been skipped. Starting with 1000 and including 1017, these field numbers applied to vertebrate specimens collected for the National Park Service at the North Rim Grand Canyon and these specimens now in the collection of that park at Grand Canyon Village. Starting with 1018, numbers again applied to Mus. Vert. Zool. specimens.

Strawberry Canyon
Berkeley, Alameda Co.
Calif. Sept. 14, 1935

1018 ♂ Otus asio bendirei

Brought in by Pauline Schultuhess from near the Poultry Division. Acc. 4773

Sept. 18, 1935.

1019 Eared grebe Sent in from Almanor, Plumas Co., Sept. 18, 1935 by H.P. Davis. Acc 4778

Oct. 4
acc 4788

1020 ♂ Golden-crowned Sparrow. Picked up by Miss Barbara Blanchard at Belmont ave, Berkeley Contra Costa Co, Calif. Saved as study skin and carcass saved for Miss Blanchard.

April 2 - Collected March 28.
accession 4931

1021 ♂ Crow 441.2 g.
1022 ♀ " 316.0 g. ova 8
1023 ♂ " 488.3 g
1024 ♂ " 433.5

These four skins put up by me from a batch of 85 ± brought in by Fish & Game people from a roosting colony blasting 6 miles West Pennington, Sutter Co. See also notebooks of W.C. Russell and F.G. Palmer. Of the lot there were saved 3 Crows as alcoholics, 22 skins, 60 skeletons, 82 stomachs and one Cooper Hawk as skeleton. Data as to age, sex, weights, size of gonads was compiled and sent to Dr Emlen at Davis, see correspondence under Date of April 6 - "

MVZ - U.C. Berkeley, Calif.
April 9, 1936 -

Ten crows received at MVZ the morning of April 9, 1936 from Dr Emlen at Davis - were old and presumably from the same lot blasted March 28, at the roost 6 mi W. Pennington, Sutter Co. Given same accession number and saved as skins.

1025 ♂	Corvus	405.6g	21.0mm
1026 ♂	"	419.3	3.0 mm
1027 ♂	"	436.8	21.5 "
1028 ♂	"	440.0	22.0 "
1029 ♀	"	391.5	2.5 mm.
1030 ♂	"	400.0	21.0 mm.
1031 ♀	"	367.7	1.5 mm.
1032 ♀	"	355.5	3.0 mm
1033 ♀	"	343.2	3.0 mm
1034 ♀	"	346.3	-1 mm

Field numbers 1035 to 1049 have been omitted. Start again with 1050 -

Beebe
1936.

MVZ - U. C. - Berkeley. Calif.
April 28, 1936.

Jays from vicinity of San Andreas, Calavaress Co., Calif. Shot April 26 1936.

♀	1050	Cyanocitta stelleri	100.0g.	8.2 X 7.0	⁘
♀	1051	" "	99.7	8.6 X 4.7	⁘
♀	1052	" "	94.3	8.6 X 6.3	⁘
♀	1053	" "	103.6	8.7 X 7.8	⁘
♂	1054	" "	114.9	4.0	○
♂	1055	" "	116.6	4.2	○
♂	1056	" "	112.1	5.3	○
♂	1057	" "	103.2	4.4	"
♂	1058	Aphelocoma	94.9 g.	9.8	○
♂	1059	"	94.4 g.	1.0	○
♂	1060	"	92.3	8.5	○
♂	1061	"	84.5	8.0	"
♂?	1062	"	90.9	?	?
♀	1063	"	84.7	8.2 X 5.3	⁘
♂	1064	"	96.9	4.2	○
♂	1065	"	92.0	8.2	○
♂	1066	"	87.7 fat	8.0	"
♂	1067	"	92.7	8.1	○
♂	1068	"	93.0	8.0	"
♀	1069	"	12.5 X 8.7 largest ova 2.8 mm	Wt. 83.4 gram	
♂	1070	"	92.6	10.5	○
♂	1071	"	86.8	7.1	"
♂	1072	"	86.5	6.5	Brood patch?
♂	1073	"	101.5	3.0	○
♀	1074	"	13.0 X 5.5 - Largest ova 2.2	Wt 81.4 g.	
♀	1075	"	7.5 X 4.5 " " .3	" 82.0g.	
♂	1076	"	103.8g	9.0 mm	○

MVZ - U. C. Berkeley, Calif.
April 28, 1936-

♂ 1077	Aphelocoma -	86.1 g.	Testes	8.2 mm.
♂ 1078	Cyanocitta -	104.0	"	3.5 mm.
♂ 1079	"	108.6	"	2.8 mm.
♂ 1080	"	111.8	"	3.2 "
♂ 1081	"	106.8	"	3.0 "

See also the notebooks of Mary Erickson, Emmett Hooper, David Johnson, Fletcher Palmer, A. H. Miller, Jack Von Blocher, W. C. Russell. Accession No. 4945. Part of 600 ± Taken on a "Jay-Shoot" on above date at above locality. Saved as skins and skeletons - all the above are skins.

May 13, 1936

Rec'd at the MVZ this morning a Cassin Auklet taken April 16, 1936 at Lat. 36-00 N and Long. 122-00 W which is opposite Lopez Pt., Monterey County. Taken by Captain L. E. Hawkins, 157 Frisbe St., Oakland Calif. Acc. 4960

♀? 1082 Cassin Auklet   No wt - Very fat.   Skin

May 13, 1936-

♂ 1083 Lazuli Bunting - picked up at El Cerrito, Contra Costa County, person's name unknown. Acc. 4961 - Testes ○
Saved as skeleton only

MVZ - U.C. Berkeley, Calif.

May 27, 1936

♀ 1084 Spinus t. salicamans Skeleton only
Sent in by Miss Grace C. Sinclair, Jenny Lind, Calaveras County, California. Picked up there May 26, 1936. Acc. 4977.

June 12 -

♀ im 1085 Petrochelidon albifrons albifrons Study skin.
From nesting colony on south side Life Sciences Bldg, U.C. campus, Berkeley, Calif. Found and donated to MVZ by Mrs E.T. Hooper. Acc. 4990. wt 16.0g. Bird of year assuming 1st winter plumage.

July 3 -

♂ im 1084 Pipilo fuscus petulans
Picked up by Miss Albro on campus - Acc 5003
Saved as study skin

♀ im 1085 Pine Siskin caught by S.B. Benson on window ledge at MVZ July 8, 1936. Saved as skin. Acc. 5005

Sex? 1086 Wilsonia pusilla chryseola Acc. 5007 Skel. only
Picked up on Redwood Highway near Pepperwood. Humboldt Co., Calif. July 10, 1936 by Emanuel Fritz, 231 Giannini Hall.

Behle
1936

U.C.-MVZ - Berkeley, Calif.

Anas superciliosa pelewensis

Duck sent in about Aug. 1 by Miss Kellog - salted skin which I degreased. Accession 5019 - From Lake Temae - Moorea, Society Islands. Collected July 7, 1936 - Miss Kellogg's field number.

Acc. 5042.

Two cormorants from Twin Islets (Ballengall Islets) Trincomalie Channel. B.C. Collected Aug. 14, 1936 at Vancouver Island by Mr G. D. Sprot. Sent in skinned out - Had to be degreased and made up into skins. Rec'd MVZ Aug. 28, 1936.

♂ 1087 Phalacrocorax auritus
♂ 1088 " "

Acc 5043

A Road-runner found dead in yard of Kulo Minard August 26, 1936, 5740 Buena Vista St., Oakland (above Lake Temescal. Presented by Mr Dyer and Mr Cain. Rec'd MVZ. Aug. 29, 1936 -

♀ 1089 Geococcyx californianus 263.8 g.

Acc. 5045

1090 ♀ Streptopelia bitorquata

From aviary of E. W. Gifford, Oakland - Died Aug. 30, 1936

Behle
1936

UC - MVZ - Berkeley, Calif.

On Saturday afternoon, August 29, 1936 - Mr Hunglish came in with several birds to have identified. One of these was a Black Duck, *Anas rubripes*, ♀, taken 6 miles East of Gustine, Merced County, May 2, 1936. which he claimed was the second record for the state. Fortunately the bird was banded with No. 34-604158 which will ultimately prove whether the bird occurred naturally in the state or was one of those that have been introduced. He had sent the number in but had not received the data as yet.

[Later found to have been banded at Los Banos: see corresp.]

Sept. 17.

1091 ♀ *Pipilo maculatus falcinellus* juvenile
Sent in for identification - Accession No. 5054 - Caught in trap at Modesto, Stanislaus Co, Calif., Sept. 15, 1936 by Irl Rogers - See correspondence - Saved as skin

Behle
1936

W.C. MVZ. Berkeley. Calif.

Nov. 20, 1936

Mr Egbert Jones of Ceres, Stanislaus Co., Calif. brought into the museum this morning two hybrid ducks bred in captivity which had been killed about October 10, 1936 by dogs. The two ducks have remained in cold storage since then. These preserved as study skins with my field numbers.

1092	♂	Gadwall x Mallard	B.S. Band No.	wt. 839.5 34-546851
1093	♂	" " "	" " "	wt. 745.5 34-618591

Data concerning these is as follows: In 1935 Mr Jones bred a wild ♂ Gadwall with a ♀ domestic mallard of small size coming from a strain known as "English Caller". As a result of this union or rather following it the female laid a clutch of 9 or 10 eggs, only one of which was fertile. From this fertile egg a female hybrid was raised. In the following year, 1936, Mr Jones bred this hybrid ♀ to a ♂ domestic mallard. In the clutch of eggs laid by this hybrid female, all were fertile but only one ♂ was raised to maturity. This one was banded with B.S. band no 34-618591 and is one of those killed and now in MVZ (No. 1093 W.H.B).

Also in 1936 Mr Jones again bred the original pair, the wild ♂ Gadwall

Egbert Jones, Ceres,
Stanislaus County

---

2 ducks, ♂♂ = product of
♂ "wild" Gadwall ♀ Mallard (domestic race called "English Caller") bred in 1936
died (killed by dog) October 10, 1936

♂ Gadwall × ♀ Mallard (domestic)

acc. 5098

♀ × ♂ Mallard domestic

♂ hybrid (½ mallard) 34-546851

♂ hybriz (¾ mallard) 34-618591

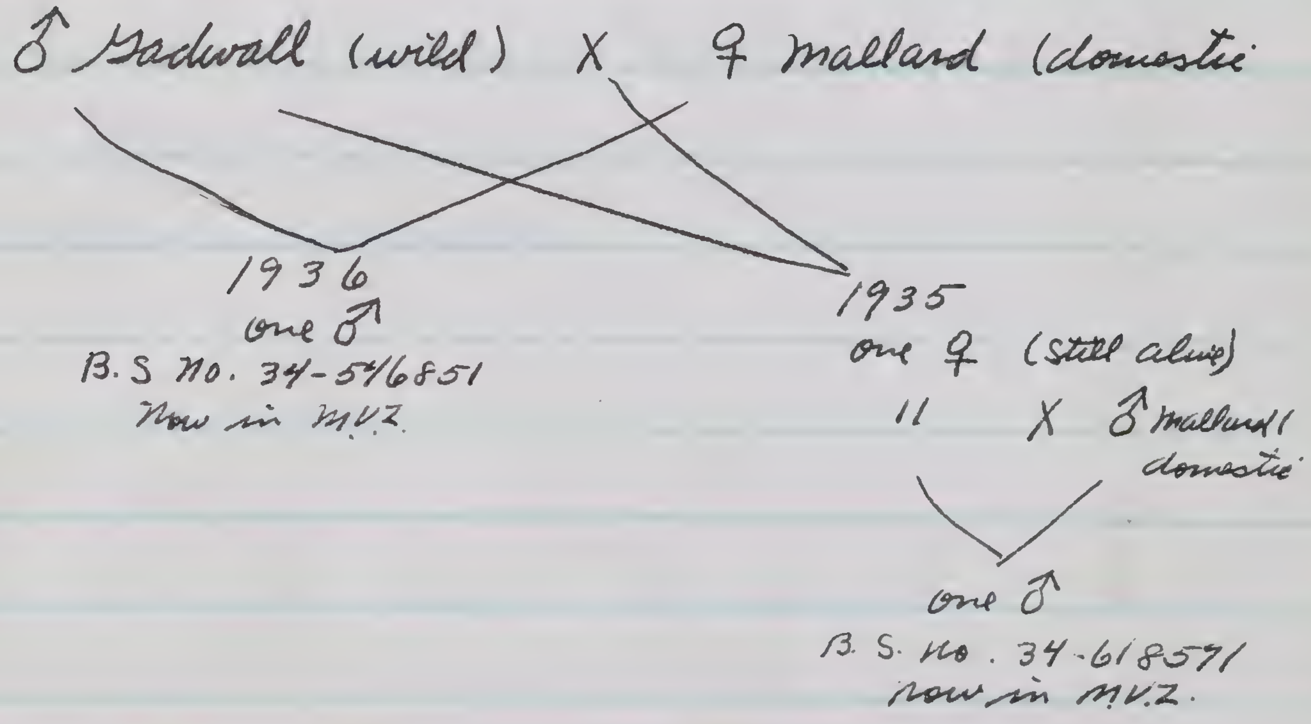
---

1 out 9 or 10 eggs fertile in first mating

all fertile in second mating

with the ♀ domestic mallard and again succeeded in raising one bird, a male banded with B.S. band 34-546851. This was also killed by the dogs and is now in the MVZ (W.H.B 1092).

Thus both these hybrid ducks are of 1936 but of different parentage. B.S. no. 34-546851 is the brother of the mother of B.S. No. 34-618591. The mother of B.S. 34-618591 which is also the sister of B.S. 34-546851 is still alive at Mr Egberts and he is going to try futher crosses.



Behle
1936-7

Carlin Nevada and Salt Lake City Utah
St. George, Utah

One mi. E. Carlin, Elko Co, Nevada

♀ 1094 Melospiza melodia Dec. 20, 1936.

Nr. mouth Big Cottonwood canyon, Salt Lake County Utah. Dec. 24, 1936

♀ 1095 Pica pica hudsonia

♀ 1096 Cyanocitta stelleri

♂ 1097 Asyndesmus lewisi

8 mi. N Draper, Salt Lake County, Utah
Dec. 31, 1936.

♂ 1098 Pica pica hudsonia

15 mi. NE St. George, Washington Co., Utah
January 5, 1937

♂ 1099 Otocoris alpestris

♂ 1100 " "

♂ 1101 " "

♂ 1102 " "

♂ 1103 " "

Behle
1937

MVZ - U.C. Berkeley, Calif.
Jan. 13 -
acc. 5141

1104 ♀ Dendroica a. auduboni Skel. only
Picked up by Ruth Woodman Pederson in Berkeley, Alameda Co., Calif. Jan. 13, 1937.

Jan. 15
acc. 5142

1105 ♀ Toxostoma Study skin.
Sent in by F.H. Dale. Picked up by Mr E.Z. Devoe, Jan. 14, 1937, in snow at Inskips Power House, 1000 ft. alt., on S. Fork Battle Creek, Tehama Co., Calif.

Jan. 16
acc. 5144

1106 ♀ Nycteris - Red Bat Skin + skull.
Sent in by E. Lowell Sumner, Jr., from Sumner Ranch, Santa Cruz Mts., 2800 ft., Found Jan. 9, 1937 lying dead by side of road. Temperature 25°F. Believed to have fallen off house trailer and shed during cold. Probably roosted there. Measurements. 108-53-10-12 Tr. 6.
No embryos..

Behle
1937

MVZ - U.C. Berkeley, Calif.

Jan 17, 1937
acc. 5145

♀ 1107 Telmatodytes p. paludicola Skin
Caught in mouse traps by Emmet Hooper, Jan. 17, 1937 at Giant, Contra Costa Co., Calif.

Jan. 19 - acc. 5146

♂ad 1108 Dendroica a. auduboni Skin
Found dead just west of Life Sciences Bldg., U.C. campus, Berkeley, Alameda Co., Calif. on Jan. 19, 1937 by Howard Twining

Jan. 22 -
acc 5148

♂ 1109 Carpodacus p. californicus Skin
Picked up near U.C. Stadium, Berkeley, Alameda Co., Calif. Jan 20, 1937 by Arthur Ohlman.

Jan 23
acc 5150

♂ 1110 Dendroica a. auduboni Skin
Picked up dead in Berkeley, by Mr George Haley, Jan 23, 1937.

Behle
1937

MVZ · HC · Berkeley, Calif.

Jan. 25, 1937

acc. 5152

Ten birds rec'd in flesh at MVZ, gift of D. D. McLean - taken in Modoc + Lassen Counties in -30° F. 9 horned larks shot from one flock. Eagle shot with one other.

[Jan. 23, '37]

Horned Larks from Mud Flat, 4600 ft, 7 mi E Litchfield, Lassen Co.

♂	1111	Otocoris alpestris	Wt.	32.8g	Skins
♂	1112	" "	"	32.1g	
♂	1113	" "	"	32.1g	
♂	1114	" "	"	30.0g	
♂	1115	" "	"	32.4g	
♂	1116	" "	"	30.8g	
♂	1117	" "	"	28.2g	
♂	1118	" "	"	30.0g	
♂	1119	" "	"	30.0g	

Eagle taken at 4 mi. NW Likely, Modoc Co.,

♂ 1120 Haliaeetus leucocephalus Jan. 22, '37

Wt. 9 lbs., 5 oz. Wing bones + Skin + body skel.

Wing spread 7 ft., 2 3/8 inches or 2 meters, 18.3 centimeters or 2183 mm.

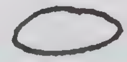
Total length 33 1/2 inches or 852 mm.

Behle
1937

MVZ - U. C. - Berkeley. Calif.

March 19, 1937

acc. 5199

Six horned larks received at MVZ March 19th in flesh. collected by A. E. Borell on March 16, 1937, 1 mi. S of Santa Fe, New Mexico, 6900 ft. They were in pairs and seemed to be nesting. When prepared the gonads of the males were enlarged  but the ovaries were still quite small

♂ 1121	Otocoris alpestris	30.0 g.
♂ 1122	" "	29.2 g.
♂ 1123	" "	28.6 g.
♂ 1124	" "	31.7 g.
♀ 1125	" "	24.5 g
♀ 1126	" "	26.9 g

April 27, 1937

acc 5234

♀ 1127 Caspian Tern Skeleton only -

Rec'd in flesh at MVZ. Taken April 26, 1937 at Bay Farm Island, Alameda Co., California by Mr Chester G. Harshner, Jr. of 1201 Peach St., Alameda. ~~County~~. Eggs as big as marbles.

Behle
1937

MVZ - U.C. Berkeley, Calif.

April 29, 1937

Acc. 5236

♂ 1128 *Melospiza melodia* Skin.

Caught in mouse trap in garden of Mrs Ernestine Arthur, Fulton St, Berkeley, Alameda Co, Calif. April 29, 1937 Testes OO

May 10, 1937

Acc. 5242

A lot of 25 cowbirds, *Molothrus ater*, brought in by W.B. Davis. Were obtained May 9, from the pheasant pens of A.E. Darby in Oroville, Butte County, California. The pens were constructed of 1 inch wire mesh and the cowbirds were able to squeeze through the holes and get in to the grain but then couldn't get out. Hundreds have been caught and killed inside the pens. English Sparrows pass freely in and out.

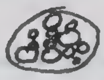
1129	♂	*Molothrus*	*ater*	*obscurus*	wt. 42.4g	Skin
1130	♂	"	"	"	" 41.2 "	"
1131	♂	"	"	"	" 38.4 "	"
1132	♂	"	"	"	" 37.9 "	"
1133	♂	"	"	"	" 42.4g	"
1134	♂	"	"	"	" 40.5 "	"
1135	♂	"	"	"	" 42.0 "	"
1136	♂	"	"	"	" 43.3 "	"
1137	♂	"	"	"	" 38.7 "	"

Behle
1937

MVZ - U C. Berkeley. Calif.

May 10

1138	♂	Molothrus	ater	obscurus	wt.	40.4 g	Skin
1139	♀	"	"	"	"	35.0 "	Very fat - Skin
1140	♂	"	"	"	"	46.6 "	" " Skin
1141	♂	"	"	"	"	46.3 "	" " Skin
1142	♂	"	"	"	"	41.3 "	Skin
1143	♂	"	"	"	"	37.0 "	"
1144	♂	"	"	"	"	40.3 "	"
1145	♀	"	"	"	"	32.5 "	Skin by Frank Richardson
1146	♀	"	"	"	"	29.2 "	Skin by Frank Richardson
1147	♀	"	"	"	"	31.2 "	Skin
1148	♀	"	"	"	"	25.8 "	"
1149	♀	"	"	"	"	30.0 "	"
1150	♀	"	"	"	"	31.5 "	"
1151	♀	"	"	"	"	28.4 "	"
1152	♀	"	"	"	"	30.0 "	"
1153	♀	"	"	"	"	—	Skeleton

In general the males had testes so large , while the females had ova .

May 14.

acc. 5248.

1154 Hylocichla ustulata ustulata wt. g Skin.

Picked up dead May 14 beneath grill-work over northwest entrance to Life Sciences Building by Alden H. Miller. Probably killed as it dashed against the door.

Behle
1937

U. C. - MVZ, Berkeley, Calif.

May 15

acc 52

1155 Hylocichla ustulata ustulata wt. Skin.

Caught nearly dead on Cragmont avenue, Berkeley, morning of May 15 - by Elizabeth M. Over of the Zoology Department.

June 4

acc. 5265

1156 ♂ Bubo virginianus pacificus Testes ○

Sent in June 3rd, arrived MVZ June 4th from Sequoia National Park thru Joseph Dixon. ~~From Ash mountain.~~ Saved as study skin.

Taken at Three Rivers, Tulare County, (not in Sequoia National Park) June 1, ~~by~~ on Ranch of Phil Davis.